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FEMA'S ROLE IN MANAGING BIOTERRORIST ATTACKS AND THE IMPACT OF PUBLIC HEALTH CONCERNS ON BIOTERRORISM PREPAREDNESS

HEARING

BEFORE THE

INTERNATIONAL SECURITY, PROLIFERATION AND FEDERAL SERVICES SUBCOMMITTEE

OF THE

COMMITTEE ON GOVERNMENTAL AFFAIRS UNITED STATES SENATE

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FEMA'S ROLE IN MANAGING BIOTERRORIST ATTACKS AND THE IMPACT OF PUBLIC HEALTH CONCERNS ON BIOTERRORISM PREPAREDNESS

MONDAY, JULY 23, 2001

U.S. SENATE,
SUBCOMMITTEE ON INTERNATIONAL SECURITY,
PROLIFERATION, AND FEDERAL SERVICES,
OF THE COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 2 p.m., in room SD–342, Dirksen Senate Office Building, Hon. Daniel K. Akaka, Chairman of the Subcommittee, presiding.

Present: Senators Akaka and Cochran.

OPENING STATEMENT OF SENATOR AKAKA

Senator AKAKA. The Committee will please come to order. I want to thank our witnesses—will you please be seated—Bruce Baughman of the Federal Emergency Management Agency and Dr. Scott Lillibridge of the Department of Health and Human Services, for being with us today. I want to also welcome Dr. Tara O'Toole of the Johns Hopkins Center for Civilian Biodefense Studies, and Dr. Dan Hanfling from Inova Fairfax Hospital.

According to Committee rules, it is required that all witnesses be under oath while testifying. So, at this time, I would like the witnesses to please stand and remain standing. Raise your right hand. Do you solemnly swear to tell the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. BAUGHMAN. I do.

Dr. LILLIBRIDGE. I do .

Dr. O'TOOLE. I do.

Dr. HANFLING. I do .

Senator AKAKA. Thank you. You may be seated. I look forward to this hearing and to hear from FEMA and HHS describe what the Federal Government is doing to prepare our local communities for bioterrorism.

I am also eager to hear from our other witnesses, who will tell us what their concerns are and how effective our Federal programs have been. We have two agencies represented here, but there are many Federal stakeholders and many programs that address unconventional terrorism. For example, we have national medical response teams, the Metropolitan Medical Response System, FEMA urban search and rescue task forces, National Guard RAID teams,

and domestic preparedness training through the Department of Justice. I want to commend these and all terrorism-response efforts.

Across the country, States and communities are also working to develop terrorism-response plans. I offer the statewide terrorism preparedness efforts in Hawaii, which have been hailed by HHS as, "exemplary," as a national model of Federal, State and local coordination and cooperation. President Bush directed FEMA to create an Office of National Preparedness, to coordinate anti-terrorism programs among all these stakeholders. HHS and its Centers for Disease Control and Prevention, with their expertise and experience, are the lead implementing agencies for bioterrorism response programs.

Bioterrorism is different from other forms of terrorism. A bioterrorist attack will not be preceded by a large explosion. First responders will be the physicians and nurses in our local hospitals and emergency rooms, who may not realize that there has been an attack for days or weeks. Preparing for biological events should not be limited to worst-case scenarios, where thousands of Americans die from an intentional release of anthrax or smallpox. A simple and perhaps more likely hostile act of infecting a population with food poisoning would also overwhelm most area hospitals. Naturally-occurring emergency infectious diseases can do just as much damage.

We must ensure that hospitals and medical professionals are equipped to deal with these threats. As former Secretary of Health and Human Services Donna Shalala once said, "Bioterrorism is perhaps the first time in American history in which the public health system is integrated directly into the national security system." Therefore, problems and concerns within the public health system directly affect our ability to plan and respond to acts of bioterrorism. Similarly, efforts to improve our preparedness for bioterrorism also improve our health and medical communities.

There are three things we must do to deal with a biological event: (1) continuous surveillance so that an unusual event can be recognized, (2) active investigation for a quick and decisive diagnosis, and (3) an emergency response. These are the areas that local and State planners concentrate on while preparing their own response plans. These are also the areas where the Federal Government can help. But how much are Federal programs that are designed to help local communities prepare for biological events, in fact, helping? Are they addressing local planners primary concerns and needs?

Last year, the TOPOFF exercise simulated an outbreak of plague in Colorado. Another exercise, Dark Winter, was performed to simulate a possible U.S. reaction to the deliberate introduction of smallpox in three States. Have we begun to apply the lessons learned from TOPOFF and Dark Winter? Are we in better position to handle a bioterrorist attack today, a year after TOPOFF or 6 years after the world learned of the Aum Shinrikyo cult and their attempts to master biological agents?

Once again, I welcome our witnesses and look forward to an interesting and educational discussion. I am glad you are here as our witnesses. I thank you very much, and Senator Cleland regrets

that he is unable to be here today. He has asked that his comments be submitted for the record.

[The prepared statement of Senator Cleland follows:]

PREPARED STATEMENT OF SENATOR CLELAND

Thank you, Senator Akaka and Subcommittee members, for conducting today's hearing on managing and preparing for acts of bioterrorism. One of today's most serious potential threats to U.S. national security is bioterrorism. I want to commend Sam Nunn and the Johns Hopkins' sponsored Dark Winter small pox bioterrorism exercise conducted at Andrews Air Force Base on June 22–23, 2001. This exercise dramatically illustrates that our response to date is woefully inadequate to deal with a domestic bioterrorist event and that a reconsideration both of strategy and organizational structure are needed. There is, as yet, no agreed upon comprehensive national strategy or plan to deal with bioterrorism. The United States has just begun to act on many of the needed biodefense programs.

During the last session of Congress, we passed P.L. 106–505. This law authorizes crucial provisions for protection against public health threats and to build a national biodefense plan. There is widespread agreement that we face a significant potential for a domestic bioterrorist attack, yet for fiscal year 2001, we appropriated only $1 million instead of the $99 million needed. Fully funding P.L. 106–505 is vital because it also recognizes the role of private industry partnerships with Federal agencies and State and local public health programs as the foundation of an effective national strategy for bioterrorism preparedness and response.

I am very proud to have the Centers for Disease Control and Prevention (CDC) in my State of Georgia. The CDC is and must be a major and integral part of homeland defense, because of its ability to expeditiously identify, classify, and recommend courses of action in dealing with biological and chemical threats. Since January 1999, CDC has been tasked by the Secretary of Health and Human Services to develop national, State, and local public health capacities to effectively respond to acts of biological and chemical terrorism. Yet it was just this past year that Congress began to appropriate funds to assist leading Federal agencies, including the CDC, in meeting this challenge. The CDC also has a critical supportive role to the Department of Defense Rapid Assessment and Initial Detection (RAID) in preventing and preparing for the possibility of bioterrorism. Additionally, CDC's research and development in areas of Gulf War Syndrome and the current anthrax threats are of critical importance to our military.

The problems with vaccine production and distribution encountered during the Dark Winter exercise parallel the current difficulties with Anthrax and adenovirus vaccines. My question is, "do we have clear procedures defining State and Federal responsibilities and on the use and distribution of the national stockpile of vaccines?" If the answer is no, then why not?

For all of the attention that missile defense has received in Congress and the Executive Branch, it is undeniably true that the use of weapons of mass destruction, in the form of biological or chemical agents delivered by terrorists, is a far more immediate and real threat to the people of the United States. We must, I repeat must, set our priorities accordingly. I thank you, Mr. Chairman and the Members of the Subcommittee, for the opportunity to offer my comments on this crucial issue.

Senator AKAKA. I am expecting Senator Cochran soon.

Mr. Baughman, we welcome any opening statement or comments you may have, so you may begin.

TESTIMONY OF BRUCE BAUGHMAN,[1] DIRECTOR, PLANNING AND READINESS, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

Mr. BAUGHMAN. Thank you, Mr. Chairman. I am Bruce Baughman, Director of Planning and Readiness Division at the Federal Emergency Management Agency. Director Joe Allbaugh regrets that he is unable to attend this session today. It is my pleasure to represent him at this important hearing on bioterrorism. I will briefly describe today how FEMA works with other agencies,

[1] The prepared statement of Mr. Baughman appears in the Appendix on page 00.

what our approach is to bioterrorism, and the role of the new Office of National Preparedness. FEMA's mission is to reduce the loss of life and property and to protect our Nation's critical infrastructure from all types of hazards. As staffing goes, FEMA is a small agency. Our success depends upon our ability to organize and lead a community of local, State and Federal agencies and volunteer organizations.

We provide a management framework, a funding source. The Federal response plan is the heart of that framework. It reflects the labors of interagency groups that meet in Washington and all 10 of our FEMA regions to develop the Federal capability to respond to any emergency as a team. That team is made up of 26 departments and agencies, along with the American Red Cross. Since 1992, the Federal response plan has been the proven framework for managing major disasters and emergencies, regardless of cost. It works. The reason is it is simple. The plan organizes agencies into functions based upon their existing authorities and expertise.

Now, we recognize that a biological scenario presents unique challenges. The worst-case scenarios begin undetected and play out as epidemics. That means that response begins in the public health and medical community. Initial requests for Federal assistance will probably come through the health and medical channels to the Centers for Disease Control and prevention, or CDC. At some point, the situation would escalate into a national emergency. As an element of HHS, the CDC is a critical link between the health and medical community and the larger Federal response.

HHS leads the efforts of the health and medical community to plan and prepare for a national response to a public health emergency. FEMA works closely with HHS as the primary agency for the health and medical function under the Federal response plan. We rely on HHS to bring the experts to the table when the Federal response plan agencies need to meet to discuss a biological scenario. As a result of these efforts, we are learning more about the threat, how it spreads, and the resources and techniques that will be needed to control it. We are making progress. Exercise TOPOFF in May 2000 involves two concurrent terrorism scenarios in two metropolitan areas of the United States. One of these scenarios was bioterrorism. We are still working on the lessons learned from that exercise. It takes time and resources to identify, develop and incorporate changes into the system.

Exercises, when conducted properly and in moderation, are critical to helping us prepare for the various scenarios we may be confronted with by a weapon of mass destruction. In January 2001, the FBI and FEMA published the U.S. Government's Interagency Domestic Terrorism Concept of Operations, or CON plan. With the coordination of HHS and other key departments and agencies, we pledged to continue the planning process to develop specific procedures for different scenarios, including bioterrorism. The Federal response plan and the framework it can provide for managing disasters can also be used to manage a bioterrorism event.

Now, let me take a few minutes to talk about our Office of National Preparedness. On May 8, 2001, President Bush asked the director of FEMA, Joe Allbaugh, to create an Office of National Pre-

paredness. This office will do the following: One, coordinate all Federal programs dealing with weapons of mass destruction consequence management; this office is not intended to take over any individual agency program or function; two, solicit input from first responders at the State and local and emergency management organizations, and how to continue to build and sustain a national capability; three, support the collective effort to design a balanced national program that involves planning, training, exercises, equipment, and other elements as required; and, fourth, identify shortfalls and duplications existing in Federal programs and make recommendations on how to address these areas.

FEMA established this office earlier this month with an initial staffing element. As the structure and activities of the office evolve, staffing will be augmented with personnel from other departments and agencies, State and local organizations. Mr. Chairman, you convened this hearing to ask about our approach to bioterrorism. It is FEMA's responsibility to ensure that the Federal response plan is adequate to respond to the consequences of catastrophic emergencies and disasters, regardless of cause. Bioterrorism presents tremendous challenges. We rely on HHS to lead the health and medical community in addressing the health and medical aspects of this problem. They need support to strengthen their detection and reporting supporting capabilities, and their operating capacity in emergency medicine. We need support to ensure that the national system has the tools to gather information, set priorities, and deploy resources in a biological scenario.

FEMA and the Federal response plan have a successful history of coordinating Federal, State and local consequence management efforts before, during and after emergencies. This track record provides a strong foundation for the new Office of National Preparedness. Thank you Mr. Chairman. I would be happy to answer any questions.

Senator AKAKA. Thank you very much, Mr. Baughman.

At this time, I would like to tell the witnesses that we will include all of your statements, full statements, in the record. Dr. Lillibridge, we invite you to make an opening statement now.

TESTIMONY OF SCOTT R. LILLIBRIDGE,[1] M.D., SPECIAL ASSISTANT TO THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES FOR NATIONAL SECURITY AND EMERGENCY MANAGEMENT, WASHINGTON, DC

Dr. LILLIBRIDGE. Thank you, Mr. Chairman and Members of the Subcommittee. Thank you for inviting me here today to discuss the activities of the Department of Health and Human Services in responding to bioterrorism, other emergencies and acts of terrorism. I am Scott Lillibridge, Special Assistant to the Secretary of HHS for National Security and Emergency Management. On July 10, Secretary Tommy Thompson appointed me to this position and directed me to develop a unified HHS preparedness and response system to deal with these important issues. I would like to discuss that effort with you, highlighting some of the areas in which HHS works with the Federal Emergency Management Agency.

[1] The prepared statement of Dr. Lillibridge appears in the Appendix on page 00.

Bioterrorism has unique characteristics, as you mentioned in your opening statement, that set it apart from other acts of terrorism. Biologic agents are easy to conceal, potentially contagious in nature, and, in the most worrisome scenario, the first responders are likely to be health professionals in emergency rooms, outpatient clinics and public health settings. HHS is the primary agency responsible for health and medical response under FEMA's Federal response plan. HHS also coordinates and provides health leadership to the National Disaster Medical System, NDMS. This is a partnership that brings together HHS, the Department of Defense, FEMA, the Department of Veterans Affairs, and the private sector.

NDMS was developed to provide medical response, patient evacuation, and definitive medical care for mass-casualty events. This system addresses both disaster situations and military contingencies. I would like to talk a little bit about bioterrorism preparedness and response—and begin with how HHS provides technical assistance to the FBI during bioterrorism threats and then discuss other issues associated with crisis management. FEMA is the lead agency in charge of consequence management. The broad goals of a national response to bioterrorism or any epidemic involving a large population will simply be to detect the problem, control the epidemic spread in the population, and to treat the victims. The Department's approach to this challenge has been to strengthen the public health infrastructure and to hone our emergency health and medical response capacities at the Federal, State and local level.

In an emergency, HHS is able to mobilize NDMS resources, CDC disease experts and the national pharmaceutical stockpile. In addition, disaster teams of the Office of Emergency Preparedness, the Public Health Services Commissioned Corps Readiness Force, and the support of other Federal agencies can be mobilized. Since fiscal year 1995, HHS, through the Office of Emergency Preparedness, has been developing Metropolitan Medical Response Systems, MMRS. This initiative enhances the existing local and city system's capability to respond to a chemical or biologic incident, and provides for triage and medical treatment. These city systems have been developed to help address the medical needs of victims of terrorism and to facilitate the transport of patients to hospitals.

In the area of training, HHS has used classroom training, distance learning and hands-on training activities to prepare the health and medical community for contingencies such as bioterrorism. Expansion of the bioterrorism training component of Nobel Training Center and Hospital at Fort McClellan, Alabama, is a high priority for HHS. We will continue our strong linkage with the adjacent Department of Justice Office of Justice Programs training facility for first responders and its National Domestic Preparedness Consortium.

The recent FEMA–CDC initiative to expand the scope of FEMA's integrated emergency management course will serve as a vehicle to integrate emergency management and the health community response efforts in a way that has not been possible in the past. It is clear that these communities can best respond together if they are able to train together. Our priorities for HHS? Well, through

CDC, we need to expand our cooperative agreements to health departments and to enhance State and local preparedness for bioterrorism.

In the near future, as part of its responsibility associated with the National Disaster Medical System, HHS must begin to broaden its perspectives to address issues related to health facility preparedness in civilian communities. It is also time to review the roles and responsibilities between NDMS partners, to see how they match against the new threats facing our Nation. In conclusion, the Department of Health and Human Services is committed to ensuring the health and medical care of our citizens. We are prepared to quickly mobilize the professionals required to respond to a disaster anywhere in the United States and its territories, and we are actively preparing for the challenge posed by acts of bioterrorism.

At the end of my second week at this new post, it is clear that close ties between HHS, FEMA, and the Department of Justice will be paramount in addressing the consequences of bioterrorism and other terrorist incidents. Mr. Chairman, that concludes my prepared remarks and I would be pleased to answer your questions at this time.

Thank you.

Senator AKAKA. Thank you very much, Dr. Lillibridge. I find the amount of work being done within both your agencies in response to this threat to be very impressive. I do have a few questions for both of you. Mr. Baughman, an Office of National Preparedness section is being created at FEMA headquarters and in each of the 10 regional offices. Will these offices be staffed by new personnel or by existing staff who will have additional responsibilities?

Mr. BAUGHMAN. They are going to be staffed really by three sets of individuals: There will be existing FEMA personnel, there will be personnel from other agencies, and then there will be State and local personnel also staffing these offices.

Senator AKAKA. These personnel from other agencies, are they going to be just coordinating with you from their agencies?

Mr. BAUGHMAN. I think initially that they will be resident at our agency until we can map out the strategy that we have been asked to work with the White House on, and then after that we will have to see how things play out. If things are well-coordinated, then I think that perhaps they could go back to their home agencies. But I think initially our intent is to have those personnel at our agency.

Senator AKAKA. You mentioned in your written testimony the Emergency Management Institute Comprehensive Course on Public Health Concerns. This sounds like just the sort of program that is needed to foster cooperation and heighten awareness to the issues surrounding bioterrorism. My question is how do communities and participants become involved? Do you find interest in these courses uniform across the country or are some States and regions very active, while others are less so?

Mr. BAUGHMAN. Senator, our Office of Training could answer that better than I could. I can provide you a response to that for the record.

Senator AKAKA. Please do. Please provide it.

Dr. Lillibridge, the key to minimizing the consequences of a biological event, whether a naturally-occurring epidemic or an overt

terrorist attack, is to notice that it is an event as soon as possible. My question is what is your office doing to help communities know if an unusual event is occurring? For example, can you tell them what an abnormal number of cases would be for a certain disease or illness?

Dr. LILLIBRIDGE. Fair enough. Mr. Chairman, we are working on a number of avenues, primarily through the Centers for Disease Control, to develop and enhance local surveillance systems at the State and local level. These systems help cross over early clues of awareness—like 911 calls and health service utilization—and help build that public service infrastructure to give us that early warning. There is more that we could be doing in this area, and we are working through training and several other grant mechanisms to develop this activity in virtually all States.

Senator AKAKA. Dr. Lillibridge, the Emergency Medical Treatment and Labor Act of 1986 establishes the general requirements for emergency rooms. For example, a hospital that operates an emergency department must comply to any medical examination request. Also, if an individual comes to the hospital with an emergency medical condition, the hospital must provide treatment. The question is, this act requires emergency care to be provided to anyone who needs treatment, regardless of their insurance status or ability to pay. Does this law have an impact on planning bioterrorism response?

Dr. LILLIBRIDGE. Mr. Chairman, I think that law relates to several of our planning efforts. One way the law relates is that we look at our preparedness and response activities to involve planning at the most local level. This includes the regulation or movement of patients, the collective act of moving certain patients to certain hospitals, and involves most facets or nearly all facets of planning at the local level. We have also given consideration to this in terms of our planning grants through CDC and through our MMRS activity at the local level.

It is something that we have to consider as an extremely important part of our planning process, but does not stop us from doing the essential things in epidemic control.

Senator AKAKA. Dr. Baughman, we have heard from Dr. Lillibridge about the National Disaster Medical System, which was designed for responding to natural disasters. In it, member hospitals are required to accept patients from other hospitals in the event of a crisis. Tell me, how will this work during a bioterrorist attack? Would a remote hospital whose participation in a system is voluntary be willing to accept contagious patients suffering from plague? Could FEMA require them to do so?

Mr. BAUGHMAN. Mr. Chairman, we cannot require them to do so, and it is voluntary, so it may be problematic, and maybe Dr. Lillibridge can maybe lend a little bit more to that.

Senator AKAKA. Would you?

Dr. LILLIBRIDGE. Mr. Chairman, in our recent exercises with TOPOFF last year and recently with Dark Winter, it was clear that even, over and above the Federal Government, that governors have extraordinary powers during emergencies, during State emergencies, that would include epidemics or an act of bioterrorism. There may be issues where they will restrict the movement of peo-

ple in their State. They may close businesses. They may even order the movement of patients or closure of certain facilities.

Many of these issues are being considered at that level of planning with the governors. At the recent Governors Association Meeting, issues of bioterrorism were the focus of nearly 2 days of discussions.

Senator AKAKA. Dr. Lillibridge, many veterinarians are familiar with diseases that affect both animals and humans. Several of these diseases are potential bioterrorism agents, such as anthrax and plague. Some diseases, such as the West Nile virus, generally affect animals before humans. These factors make communication between veterinarians, medical doctors and public health officials very important. How does the CDC communicate with local and State veterinarians? Do you have a senior level official who is in regular contact with the animal health community?

Dr. LILLIBRIDGE. Yes, sir. We have communication with the veterinary community through a number of fora. As a matter of fact, in the bioterrorism program at CDC, essentially half of the staff in our surveillance office are veterinarians—for that very reason, for the crossover. It became clear during West Nile and other activities related to preparedness for bioterrorism that consideration for crossing over the human health and the veterinary health link was extremely important. We have embodied that concept in the surveillance activities that we are working on—and in some of our partnerships with the Department of Justice and the Department of Defense—as we work on bioterrorism preparedness research and response activities.

Senator AKAKA. Dr. Lillibridge, I agree with your plans to strengthen surveillance networks beyond public health departments. You mentioned how detailed information on emergency department visits, 911 calls, health service usage, and pharmacy sales would be useful for timely and effective detecting and reporting of disease outbreaks. Do you think that also including veterinarians in this network would be useful? What resources would a community require to get all of this information?

Dr. LILLIBRIDGE. Mr. Chairman, we think that would be extremely useful. We have embarked on a pilot project to begin looking at linking animal and human health through surveillance, and it is clear that there is going to be—if there is a bioterrorism attack in the human population—some intrusion perhaps into the animal population. That is going to be extremely important from the veterinary side. The West Nile virus showed us that early attention to cases in animals could precede cases in humans, and those will expand over time. Through linkage with the veterinary associations, our colleagues in the research and veterinary communities, we are beginning to forge those links.

In the Office of Bioterrorism Activities at the Centers for Disease Control, there is deliberate consideration for active engagement and expansion of those kinds of networks.

Senator AKAKA. I am sure my colleagues will have questions for you, so I will keep the record open, of this Subcommittee so that other questions may be placed into the record.

Dr. Baughman and Dr. Lillibridge, I want to thank you again being here this afternoon and for your cooperation. This, I think,

will be the beginning of some interesting planning for the future, but there is no question that we must take the time to do critical planning in case something like this happens to our communities. Thank you very much.

Mr. BAUGHMAN. Thank you, sir.

Senator AKAKA. So you may be excused.

Dr. LILLIBRIDGE. Thank you, Mr. Chairman.

Senator AKAKA. Thank you. And now, we invite Dr. Tara O'Toole of the Johns Hopkins Center for Civilian Biodefense Studies and Dr. Dan Hanfling of Department of Emergency Medicine at Inova Fairfax Hospital. I invite you to come to the witness table, and as soon as you are ready, we will proceed with the hearing.

Dr. O'Toole, I know both of you have taken the oath already, so we will continue. Dr. O'Toole, we welcome any opening statement or comments that you may have, and as I said, your full statement will be placed in the record.

TESTIMONY OF TARA O'TOOLE,[1] M.D., M.P.H., JOHNS HOPKINS CENTER FOR CIVILIAN BIODEFENSE STUDIES

Dr. O'TOOLE. Thank you, Mr. Chairman. Thank you for the opportunity to be here today and to make remarks on this very important topic. I want to emphasize at the beginning that in my view and that of my colleagues at Johns Hopkins, FEMA is a government organization success story and has brought vital help and comfort to millions of Americans through a whole array of disasters over the past decade and more. Likewise, CDC is world-renowned as an expert in epidemic management and in public health, and there is no doubt about either its reputation or its expertise.

That said, it is my belief that in the context of responding to a biological weapons attack on U.S. civilians, FEMA and CDC are likely to find themselves called upon to facilitate decisions and actions which are unfamiliar, unpracticed and highly controversial within the decision making circles. They are also going to be asked to coordinate a medical and public health response, which is not only complex, and time sensitive, but will depend critically on institutions and infrastructures which we believe are very fragile and may well become dysfunctional or collapse altogether in the face of a sudden surge in patient demand. I am talking here particularly about the medical service infrastructure. Hospitals, in particular, have very little elasticity or ability to respond to sudden surges in patient demand. Second, the public health infrastructure, which has been neglected financially and, in terms of political attention, for decades cannot handle the demands an epidemic would impose.

It is clear that Secretary Thompson has put bioterrorism very high on his agenda. I think the appointment of Dr. Lillibridge to be his special assistant is an extremely positive move. I also think that Director Allbaugh's designation of a new Office of National Preparedness is very encouraging. There is no question that the Federal Government—Congress and the administration together—have made progress in bioterrorism response in the past several years. But I am going to focus today on your question, Mr. Chair-

[1] The prepared statement of Dr. O'Toole appears in the Appendix on page 00.

man, are the current Federal programs really meeting local needs, and what could we do to meet those needs more effectively?

I am going to take a glass-half-empty approach here, with the appropriate caveat beforehand that I think we have made progress. I am going to suggest four recommendations which I will run through right now. First of all, I think we have to get hospitals and hospital leadership much more engaged in bioterrorism response planning. That is going to take attention from the appropriate Federal agencies, but also money from Congress, and I will come back to that.

Second, I think we have to really assess by means of independent studies that are beyond reproach, the actual capacity of the National Disaster Medical System, the VA hospital system, and other institutions that the Federal response plan now says, are going to be there if we need them to treat sick people in the midst of epidemic.

Third, I think we need to do a lot more to design, assess and encourage drills, exercises such as TOPOFF, that would include not only the usual responder communities, including hospitals and public health officials, but would also include decisionmakers themselves, members of Congress, members of the cabinet and the National Security Council, and so forth, so that the issues that they are going to be confronting if—God forbid, there is a bioterrorist attack—are more familiar and the options are also perhaps more lucidly understood.

So that is where I am going to end up. Let me go back to my analysis of why those recommendations are, in my view, necessary. You have already outlined, Mr. Chairman, how a bioterrorist attack would differ from natural disasters or even other kinds of catastrophic terrorism. It is going to cause an epidemic. The awareness of the epidemic will likely build slowly as people die inexplicably or large numbers of people become ill and report to the medical care system. Hopefully, early on, physicians and clinicians will alert the public health system that something strange is happening. That does not now happen, as a matter of course.

When the first two cases of West Nile virus were called in to the New York City Department of Health, there were already a dozen cases of encephalitis in hospitals in New York City. Encephalitis is a legally-reportable disease, but none of the physicians caring for those patients had called them in. There is a lot of data to support that this is usually the case. It is also the case that most health departments do not have the resources to man phone lines 24 hours a day, 7 days a week. So in many States, even if the physician were to call some suspicions in, he or she may not get an answer on the other end of the line for a day or more.

The U.S. medical care system has been under tremendous financial stress for at least a decade, and one of its responses to these financial pressures has been to cut out excess capacity. Hospitals in virtually every town in this country, whether it is the Johns Hopkins Medical Center or a small rural hospital, are basically now functioning on "just-in-time" models. The number of nurses that are going to be working at Hopkins tomorrow are based upon the number of patients in the hospital today; likewise for supplies, for antibiotics, for what have you. It is very difficult for any hos-

pital to ramp up quickly in response to a sudden surge in demand, as we find out every flu season.

Staff shortages are chronic. They are not just in nursing, which is the most famous source of shortages right now, but they cover virtually all of the functions of the hospital: Respiratory technicians, lab technicians, pharmacists and so on, and these staff shortages are expected to worsen. If we are in the midst of an epidemic, particularly a lethal epidemic or one that is contagious, one has to wonder if health care staff are going to report to work. Some are going to have to be home caring for their own families. Others may be sick. Others may be fearful of bringing contagion home. So these staff shortages may worsen, just at the time we have great need for people working in hospitals in dealing with patients.

Few, if any, hospitals in America today could handle 100 patients suddenly demanding care. The Secretary of Health in Maryland did a study a year ago, after a fire in a high-rise building which luckily caused no serious injuries, to see if Baltimore or, indeed, Maryland, home to two medical schools, could handle 100 patients suddenly needing ventilator assistance. We could not. There is no way, and this is a State with over 50 hospitals in it. There is no metropolitan area, no geographically-contiguous area, that could handle 1,000 people suddenly needing advanced medical care in this country right now.

There is no surge capacity in the medical care system. This is most serious in the hospital sector, but it also pertains to doctors' officers and clinics. That is a big problem. We need to deal with that fact. It is also the case that hospitals are not now engaged in bioterrorism planning. The Office of Emergency Preparedness at HHS has tried to get hospitals engaged, as has FEMA, to a lesser extent. Hospitals are not interested. We had a meeting with over 30 CEOs of hospitals of all shapes and sizes last year, and they told us the following: We are so busy trying to keep our heads above water on a day-to-day basis that we are not going to put aside any resources for bioterrorism planning unless two things happen: (1) the highest levels of government have got to tell us that this is a priority and that we are expected to play a vital role, and (2) they have got to send money. Hospitals today do not feel that they can divert any of their precious resources, even to what it takes to plan for a bioterrorism response. That lack of engagement of the hospital sector in planning is a big problem for us.

Moving on to the public health infrastructure, Dr. Lillibridge talked about the vital work that CDC is doing to try and improve the public health infrastructure at the State and local level. When Secretary Thompson testified in May before the combined Senate committees, he affirmed that improving the public health infrastructure is possibly the most important task ahead of HHS, in improving bioterrorism response. I would agree, but we are spending less than $50 million a year on what the Secretary of HHS—two Secretaries of HHS—have now said is the most vital component of bioterrorism response. This is a piddling amount for so crucial a feature of our capacity to protect people from epidemic disease.

I think we have to spend less attention asking the question who is in charge and more time and attention thinking about what are we going to do and what information decisionmakers are going to

need to make informed decisions. During the Dark Winter exercise, which was a fictional smallpox scenario that asked a panel of former high-level government officials to act as members of the National Security Council, the participants were continually asking for more information, more data: What about this? What is the story here? How many people are sick here? How many more can we expect to get ill?

We could not answer those questions, and, in fact, these participants had more information than they would in the real world. Once we know we are under attack, once we know we have an epidemic underway, it is the public health officials who have to answer the question: How many people are sick? Where are they? What do they have in common? How many other people are likely to become ill? Where are the supplies that we need in order to protect people or to give them effective treatment and so forth. If the State health departments are not able to answer those questions, there will be very little that FEMA or CDC can do.

CDC itself is quite small. There are fewer than 150 people in the Epidemic Intelligence Service, which is, in the normal course of small natural outbreaks, who you would call upon to augment State and local health departments. Now, CDC could probably, in a dire emergency, put in the field 1,000 or so people who have some background in epidemic control, but CDC itself has a very small office of bioterrorism. Most of the people working in it are matrixed to other responsibilities, and they could use some more resources in this important endeavor.

I mentioned that there are vulnerabilities in decisionmaking structures. This is reflected, I think, in Congress' continuing worries about who is in charge of bioterrorism response, and also showed up in many different guises in the TOPOFF exercise. We found, in our analysis of TOPOFF, which we agree was an enormously valuable drill that we ought to consider repeating in many different ways—we found that there were several different joint operation centers. We found that hospital leaders had no idea who was in charge or who to call for information or to get more supplies. It appeared that the law-enforcement operations and the health-care operations were running on separate tracks. The public health and the medical people were meeting in one place and making their own sets of decisions, and the law-enforcement folks were going about their business. There was not actual conflict between these two hubs, but there did not seem to be a lot of collaboration or crosstalk. I think that would be an unrealistic way to go in the midst of an actual attack on the United States.

We also found that key participants could not really tell you what decisions had been made. For example, people who were in the throes of things had very different ideas about whether or not it had been decided to actually quarantine Denver and Colorado. That is a key decision, and yet there was dispute about whether it had been made or not. We found in Dark Winter and also in the course of conversations with many different officials at both the State and Federal level that there is a preoccupation with imposing quarantines, particularly if the disease is contagious. There is an array of public health measures beyond quarantine, before quarantine, that are likely to be much more beneficial, that are much

easier to employ, and that ought to be considered long before anybody starts talking about closing down Baltimore, Washington, DC, or New York City. Yet these different public health measures, I think because they are unfamiliar to governors and to Senators and to national security officials, have gotten very little discussion or attention. Also, for these measures to be put in place, certain preparatory actions have to be considered.

So all of these vulnerabilities in the decisionmaking structures, in addition to the ones Congress has already noted—46 different agencies, the national security crowd and the law-enforcement crowd and the public health crowd all trying to be coordinated and collaborative—I think deserve intense attention and discussion.

Finally, we need more effective vaccines and medicines. Some of the most effective and important bioterrorism response tools are not going to be there unless they are gotten ready long before an attack occurs. We now have drugs or effective vaccines for only about a dozen of the 50 pathogens thought to be most likely used as biological weapons.

We are going to be asking FEMA and CDC to lead a response to an epidemic without having sufficient supplies of effective medicines and vaccines. This is like asking firefighters to respond to a 12-alarm blaze without water or foam. It is crazy. We really need to give serious consideration in this country to a major biomedical R&D program that would, first of all, target the likely bioweapons pathogens and create effective medicines and vaccines for those organisms, and second that would delve into the causes and means of preventing and treating infectious diseases, generally. I do not see any way around this.

As biology progresses, which it is doing at a prodigious pace, both the power and the diversity of biological weapons is going to increase. That is where the trajectory of science is going. We have to keep up with it. We can do this, and we can shift the advantage from the offense to the defense, if we invest the tremendous talent in R&D and biomedical areas that exist in this country appropriately, but we have to get going on this.

So, to end, Mr. Chairman, my recommendations again are: First, engage hospitals and their leadership and get them involved in planning and responding to bioterrorism. Congress must lead in this. They must signal to hospitals that they have an important role to play, and also spend money so that hospitals can show up. Second, we should assess the real capacity of the National Disaster Medical System and the VA hospital system via independent analyses of our current institutional capabilities and plans to care for the sick, and find out if that really is a solid pillar of the Federal response plan. Third, we should mount a substantial research and development program that involves biomedical talent in the private sector and the universities. Fourth, I would encourage FEMA, in particular, to design, assess and use drills that might reveal the vulnerabilities and inspire coordination and improve awareness of the issues and options that a biological weapons attack would present to decisionmakers.

Thank you.

Senator AKAKA. Thank you very much, Dr. O'Toole.We will now hear from Dr. Hanfling.

TESTIMONY OF DAN HANFLING,[1] M.D., FACEP, CHAIRMAN, DISASTER PREPAREDNESS COMMITTEE, INOVA FAIRFAX HOSPITAL, FALLS CHURCH, VIRGINIA

Dr. HANFLING. Mr. Chairman, thank you very much for inviting me here this afternoon to discuss issues that I think are of great importance to the well-being of our Nation. I am Dan Hanfling, a board-certified emergency physician with extensive experience in the practice of out-of-hospital emergency care. As an "ER doc" working in the trenches of Inova Fairfax Hospital, a teeming, bustling emergency department and trauma center located just across the river in northern Virginia, as medical director of one of the best-respected fire and rescue services in the country, and as a veteran of the urban search-and-rescue disaster environment, I can tell you that I have seen pain, suffering and devastation that is, at times, unimaginable. But the consequences of a surreptitious release of a biological agent in our midst, or the effects of an as-yet unconsidered, newly-emerging, infectious pathogen would make what I see daily pale by comparison.

I would like to discuss briefly the ability of emergency departments to handle the aftermath of a bioterrorist attack. Conventional pre-hospital and hospital disaster plans prepare for events that may result in the transport of tens or possibly hundreds of patients to local community emergency departments and trauma centers. Even these extenuating circumstances would place a significant burden on most local communities, as Dr. O'Toole just mentioned. Emergency department overcrowding, nursing staff shortages, hospital financial burdens and other constraints on our existing health care system make rendering such care difficult. These conditions contribute to impediments that hamper local disaster planning and preparedness.

Across the country, hospitals are so full that ambulance crews are often rerouted or diverted from where they usually deliver their patients. In northern Virginia, this is what we call circling the beltway. Facing the difficulties that we face now, how are we to manage the number of patients that will require care in the aftermath of a bioterrorist attack? Emergency departments and in-hospital patient bed availability will be a major issue, so, too, the ability to encourage trained personnel to remain to treat patients. Razor-thin inventories of pharmaceutical and medical equipment will be quickly exhausted. Effective communication links will be crucial, and yet only a handful of communities have invested the money to creating a system that works in a crisis. And all these become issues only after the deluge has struck.

I would now like to discuss the local impact of Federal agencies. We have come a long way towards improving the role of Federal agencies in community-oriented disaster mitigation, and it is in large part due to the tremendous efforts of the agencies that were represented here before us today. However, disaster mitigation must be accomplished using local resources and by the local community. Successful local disaster-planning efforts must be predicated on the fact that the calvary is not coming, at least not right away. I must emphasize that the issue of bioterrorism is not exclu-

[1] The prepared statement of Dr. Hanfling appears in the Appendix on page 00.

sively a large, urban, traditional first-responder event, as you have heard mentioned many times already this afternoon.

This will affect all types of communities, urban, suburban and rural, and it will be the medical and public health communities that are up to bat first. So this is where we must focus our efforts. Federal support of local and regional planning efforts, taking an all-hazards approach, but geared towards bioterrorism preparedness, is what is greatly needed. How can this be effected? First, invest in restoring our medical infrastructure to be the strongest possible. We must focus attention on the issue of hospital and emergency department overcrowding. Second, support the development of a meaningful partnership between the medical and public health communities. Even without shooting for pie-in-the-sky information system capabilities, funding must be made available now to pay for the time required to conduct drop-in surveillance, such as was performed in the metro Washington, DC area during the past Presidential inauguration. Finally, promote disaster preparedness at the local level specifically by funding educational, training and planning initiatives.

This process has already begun. The Department of Health and Human Services and the American College of Emergency Physicians recently released a report, that was funded by the HHS Office of Emergency Preparedness, on the current state of training for civilian emergency medical responders. That includes paramedics, firefighters, emergency physicians and nurses. This report evaluated current training programs, analyzed barriers to implementing training, and established objectives, content and competencies for the training of these individuals. This represents a very important first step in the right direction, because it is clear that we must begin by creating a cadre of knowledgeable health care responders.

I want to be more specific. Federal funding for bioterrorism preparedness must be made available to hospitals, and a framework for hospital and community-wide planning, in fact, already exists. Guidelines of the Joint Commission on the Accreditation of Hospital Organizations are carefully followed by hospitals that wish to achieve and maintain coveted accreditation status. However, they receive no funding to implement such guidelines, and these guidelines specify the following: Establishing community and hospital linkage by integrating the hospital with community-wide response agencies; identifying alternative care treatment facilities; establishing backup external and internal communication systems; providing an ongoing orientation and education program; and conducting drills each year. Please, Mr. Chairman, help us fund these important steps.

In March 1992, patients from the first documented anthrax hoax were treated in Inova Fairfax Hospital. Three years prior to that, Ebola virus decimated a stock of laboratory rhesus monkeys in Reston, Virginia, and again it was Inova Fairfax Hospital in the eye of the storm. Each episode involved few patients and the lethality of each infectious agent was not an issue, so we breathed a sigh of relief. But now, almost 10 years later, emergency departments, hospitals and the health care community are not organized to treat victims of a bioterrorist attack. Meaningful discussion on the issue of domestic preparedness must focus on the development of commu-

nity-wide endeavors to meet this tremendous challenge. In order to be truly effective, the planned Federal efforts to improve domestic preparedness will require substantial additional resources and funding at the local level.

With 20/20 hindsight, one can say that "duck-and-cover" represented a somewhat ludicrous civil preparedness stance in the face of nuclear attack. I hope that as emergency planners of the future look back on our discussions of today, they do not chuckle the way that some of us do now.

Mr. Chairman, I truly appreciate the opportunity to be here and, of course, I am willing to take any questions.

Senator AKAKA. Thank you very much, Dr. Hanfling. I appreciate your statements. You have certainly identified the huge problem that this will bring, as well as to mention some of the resources and maybe how we can bring it together, including resources and money, possibly, from Congress. But, Dr. O'Toole, the Department of Justice is the lead agency and in sole command of an incident while in the crisis management phase. FEMA, as we have heard, is responsible for all consequence-management activities.

The question is do you find this division between crisis and consequence management useful in combatting and responding to biological terrorism?

Dr. O'TOOLE. No.

Senator AKAKA. Can you expand on that?

Dr. O'TOOLE. Well, there will be no crisis in a bioterrorist event, as it is traditionally understood. If it is an announced attack, then perhaps there will be some prelude during which people try to figure out how to mobilize a response. But it is likely going to creep up on us, and it will be the medical and public health community, not the intelligence community, not the law-enforcement community, that gets the first inkling that something is up. So there will not be that initial crisis response, as there was, for example, in the Oklahoma City bombing. It is going to have very different flavor. It is going to have a very different pace than other sorts of disasters.

I do not think the distinction between crisis and consequence management is helpful. I am not sure it is a problem. I think the FBI obviously would be involved very early on, at the first suspicion that this was a deliberate epidemic, and I think they will have their job to do. I do think it would be very useful to deepen the coordination and collaboration between the FBI and public health at the local level. One FBI agent in New York told me that they would have at least 200 to 500 people on the ground within 24 hours after a major bioterrorist attack. As a public health professional, I was very envious of that operational capability. Public health cannot do that. Even if we had the full force of CDC behind us I do not think we could do that in 24 hours.

Early on, the FBI and the public health officials are going to want answers to virtually the same questions: Where were you? What were you doing? Who have you been in contact with? If everybody is holding the same set of questions on palm pilots that get coordinated, maybe the FBI and the public health could share their expertise and resources in very constructive ways. So this crisis consequence management division, I think, is not very helpful. It

is basically not going to exist as even an imaginary line in a bioterrorism event.

Senator AKAKA. Dr. O'Toole, you stated that the medical and hospital communities need to be included in bioterrorism preparedness and response planning. Are there other groups that are routinely left out of the biological terrorism discussion, and if you know, if so, why?

Dr. O'TOOLE. Well, I think you touched on the veterinarians, who are also very important. You could envelop the entire world in bioterrorism response and were, Lord forbid, there to be an epidemic, we will envelop the entire world very quickly, because it will affect transportation. It will affect trade. It will affect virtually every aspect of human activity. But if we are setting priorities in terms of increasing awareness and fostering engagement, my list right now is, (1) the hospital community, because they are the core of the medical community, institutionally speaking; and (2) would be the governors, who I think have an enormous amount at stake and are in a position similar to hospital CEOs. They say, "Look, I have an enormous amount going on. I have daily fires I have to take care. I have major priorities for my State that I want to accomplish." National security is not usually within the purview of governors, and they do not consider it to be their business. I think it would be very helpful if the governors were awakened to the implications of bioterrorism and started applying their own insights, as well as their political muscle and influence, to the problem.

Senator AKAKA. You also mentioned that there are other public health measures that can be used instead of quarantine. Can you tell me what they are and how can we make these known to policy makers and planners?

Dr. O'TOOLE. Well, there has been a lot of discussion about this lately within public health circles and also at Dark Winter. Quarantine is a concept that actually comes from the Middle Ages, when they forced ships to lay off at one corner of the harbor for 40 days, to try and prevent the introduction of diseases into the port. Sometimes it worked, sometimes it did not, but it became a historical fact. Quarantining a major metropolitan city is all but impossible, as we discovered in TOPOFF. They tried to impose a quarantine on Denver initially, when they realized they had a contagious disease abroad and they did not have enough antibiotics to protect everyone from the disease. That is the first problem.

If you have the vaccines and you have the prophylactic antibiotics, you do not have to worry about quarantine. You can give people the protective medicines and they can go on about their way. The second problem is that by the time you know you have got an epidemic on your hands, people who are infected are probably going to be all over the world, and calling them back and gathering them together in one place is basically going to be impossible.

Another method beyond appropriate medicines and vaccines is to limit the interaction of people in ways that are less Draconian than quarantine. So, for example, you can forbid congregate gatherings. You can cancel sporting events and so forth. You can limit, for example, the transportation of people without completely forbidding the movement of cargo and food, so you do not find the problem

they did in TOPOFF. Three days into the quarantine, they realized Denver was out of food.

Probably the most important thing one needs to do is enlist the help of the public at-large. This is a constantly-neglected priority. I neglected it in my testimony today, partly because the notion of engaging the public in a cooperative enterprise aimed at stopping the spread of disease or protecting whole populations seems to be so hard.

But we do need to think through how we would communicate effectively with people and tell them how best to protect themselves and their families. People do not panic in catastrophic situations, history shows. They actually do very reasonable things, and if you give them reasonable options, they will pursue them. If you tell them, on the other hand, there is a deadly plague abroad in your city, your kids may die, there are not enough medicines to go around, this city is running out of medicines and we are about to close all exit routes out of the city, they are probably going to pack up their kids and try to get someplace where there are still medicines or at least less of a danger.

So I think enlisting the public in cooperative measures that are not coercive is probably one of the most important things that we could do.

Senator AKAKA. Dr. Hanfling, are the physicians and nurses in your hospital trained to watch for unusual clusters of symptoms or cases that are indicative of bioterrorist activity, and would you explain the chain of command on such cases?

Dr. HANFLING. To answer the first question first, with respect to the training and capabilities of our emergency physicians, nurses and other health professionals, there has been very limited formal training of these staffs on these issues. A handful of physicians and a few nurses have had the opportunity to attend some of the hospital preparedness training that came about as a result of the Nunn-Lugar-Domenici Domestic Preparedness Program. But, as you know and have probably heard in testimony previously to this Subcommittee, there was very little attention focused on the hospital portion and inpatient treatment, diagnostic, and therapeutic modalities during that curricula. Most of it was actually focused on the traditional first-responder community.

During the Presidential inauguration this past January, we actually implemented as part of a State of Virginia Department of Health project, a "drop-in" surveillance program where, for the 2 weeks preceding the inauguration and the 2 weeks following the inauguration, we were looking at every emergency department patient with respect to one of a number of symptoms that they presented with. Unfortunately, because of the constraints that I mentioned earlier in my testimony, this was very difficult to effect and, in fact, we had to have the health department supply their own personnel to review each and every one of our charts. We see up to 250 patients in a 24-hour period, and to do the paperwork that was required was onerous and difficult, on top of all of the other requirements for patient care.

To answer your second question, with respect to chain of command, the chain of command is very loose within the hospital organizations. There has been a lot of effort put forth—in fact, this has

been championed in the State of California, in the Office of Emergency Preparedness, or whatever their title is, in developing a hospital incident command system. This is a formal application of a framework that addresses the issue of chain of command, and this is beginning to catch on in the hospital communities. But, again, without funding for support of these endeavors, it is very hard to put these in place.

So when we talk about our current chain of command, it involves the chairman of the emergency department, it involves the chairman of the disaster preparedness committee, it involves the chief administrator of the hospital, it will, at some point, involve the fire chief or his designate and the police chief and his designate, but I can tell you I do not think any of us have ever sat down at a table together. So it has never really been tested.

Senator AKAKA. In his testimony, Dr. Hanfling, Dr. Lillibridge stated that one of the lessons learned from the TOPOFF exercise was the importance to link emergency management services and health decision making at the State and local level. He gave the example of training to help workers to understand emergency management tools, like the incident command system. In your opinion, how big a task is this? Do you feel that health care workers will welcome this training?

Dr. HANFLING. Well, I would like to comment on some of what Dr. Lillibridge mentioned in his response to that question of yours. Primarily, the efforts of training that come from the Federal level have been designated towards the traditional first-responder community. So this really ends up falling in the laps of our pre-hospital fire and rescue services providers. There has been very little engagement of the folks that I mentioned in my testimony from the hospital community and, as Dr. O'Toole mentioned, in the public health community, in these same sorts of emergency management curricula.

To get our emergency physicians and nurses, our paramedics and firefighters, to do the sort of reporting that they are required to do today as part of their day-to-day work is an onerous and difficult task enough, and that is, I think, the challenge of providing yet additional curricula and additional requirements. We need to find a way to incentivize these efforts, to make it worth their while and, at the same time, not make it yet another additional requirement that might be viewed as a burden for additional work.

Senator AKAKA. Thank you, Dr. Hanfling.

Let me ask my friend and colleague, Senator Cochran, for any statement that you may have and questions that you may have.

OPENING STATEMENT OF SENATOR COCHRAN

Senator COCHRAN. Thank you very much, Mr. Chairman. I appreciate the fact that you have organized this hearing. I think it is a timely subject to discuss. I was pleased to see the administration assume some responsibilities earlier this year, and try to set up a framework for coordinating and examining the capabilities we have to deal with these threats. I am hopeful that that will focus attention, as obviously attention is being focused by this Subcommittee today, on the subject and how serious it can be and how

it could stretch our resources and also be a threat to the lives and health of our American citizens.

So we want to be sure that we are getting it right, that we understand the facts, and that we understand what the improvements are that can be made to deal with this very serious situation.

Thank you very much, Mr. Chairman. I have some questions, but I do not want to interfere with your——

Senator AKAKA. Well, you are welcome to——

Senator COCHRAN. Well, I will ask Dr. O'Toole—I see that you are at the Johns Hopkins Center for Civilian Biodefense Studies—what your impression is of these new suggestions that we are hearing regarding coordination? There had been some suggestion that the Department of Health and Human Services was not very well-organized to handle this job, and this administration has suggested that a new position of special assistant to the secretary would help increase the coordination of the department's anti-bioterrorism efforts. Do you agree with that?

Dr. O'TOOLE. Yes, very strongly, Senator. I think Secretary Thompson's appointment of Dr. Lillibridge to be his special assistant on bioterrorism is a very good idea. As the Chairman remarked earlier, HHS is not normally in the room when national security issues are being discussed, and yet bioterrorism preparedness requires a sustained, collaborative effort here in Washington and around the country amongst many different agencies, including HHS. So having someone who is in a position to run to meetings, which the NSC often calls at the last-minute, as you know, and to present the medical point of view, I think, is an enormously important step forward. I think Secretary Thompson's testimony at the May hearings also evidences that he is very aware of bioterrorism as a high-priority issue and intends to grab hold of it.

Senator COCHRAN. I think the President has also asked the Vice President to undertake a high-level review, to be sure that we do what we can to focus and increase the Federal Government's ability to respond government-wide to a biological weapons attack. Do you agree that that is a step in the right direction, as well?

Dr. O'TOOLE. I think the more light we shed on this, the better off we are, and I think the President initiating those kind of discussions at the highest levels is very important, substantively and also as a signal that he intends that the government take this matter very seriously.

Senator COCHRAN. Dr. Hanfling, I noticed that FEMA and CDC, the Centers for Disease Control, have entered into an agreement to conduct a course for emergency management and health community personnel to improve their ability to respond to a bioterrorism attack. Do you think that may be a step in the right direction, too, to generate more interest in the health community and awareness?

Dr. HANFLING. Yes, Senator. I think that these efforts to improve education, especially focused on the State and, most certainly, at the local level, will be steps in the right direction. To put it in perspective, though, in order to get those emergency managers and those personnel involved in the day-to-day care of their communities away, to be able to attend courses that might be a week in time, may require travel, etc., requires the sort of support that is not always available in the local communities.

I would also make another point, which is that it is often the best and the brightest who have the opportunity to attend those sorts of courses and curricula, and I think that the model that the Federal agencies have used in the past, which is a train-the-trainer model, is a successful way to impart that information. But those may not be the folks who are manning the helm when the proverbial event happens. So we have got to allow this information to trickle down to all levels of providers.

Senator COCHRAN. Thank you, Mr. Chairman.

Senator AKAKA. Thank you for your questions. I have a few more questions I would like to continue with.

Dr. Hanfling, I asked Dr. Lillibridge about the Emergency Medical Treatment and Labor Act of 1986, which guarantees emergency room care to anyone who seeks treatment. As someone who works in an emergency room, how do you see this law impacting bioterrorism response?

Dr. HANFLING. I commend you on asking that question, because I do think that this is an important issue that needs some attention. As an emergency physician, I view the EMTALA, or Emergency Medical Treatment and Labor Act, as really providing the legal framework that creates a safety net for providing care across our country for those who have no other place to turn. So I am very supportive of this act, in supporting the efforts that I try to achieve each and every day. But in the context of a bioterrorism attack, I think we have to consider the utility of such a law, which requires medical attention and more than just triage. It actually requires a medical screening exam for each patient who comes to the hospital, and I think Dr. O'Toole is more the expert in terms of looking at some of the strategies that might be put into place, to enact treatment in out-of-hospital environments, but one such endeavor might be to sequester patients who are sick or patients who have not been exposed in facilities far away from the community that is impacted, and yet those patients may initially present to the local community hospital seeking care.

So I think we have to consider appropriate amendments of acts such as EMTALA in the setting of a catastrophic event such as bioterrorism, that would change the structure in which we are practicing medicine and delivering all of our social services day-to-day. Does that answer your question?

Senator AKAKA. Yes. Thank you very much for that response. You stated, Dr. Hanfling, that relationships between Federal agencies and State officials have improved, but are still limited on the local level. Are there steps that we can take to improve these relationships?

Dr. HANFLING. I think that attention has been focused appropriately here this afternoon on the role of governors and the important power that the governors wield in such crisis situations. It is clear that the Federal response plan is put in place and designates lead agencies in crisis and consequence management, but the fact is that these disasters occur at the local level, and that in occurring in that manner, at least initially, the State governors have some ownership and authority of those efforts. So I think that there ought to be some attention focused at the State level to really making the sorts of meaningful relationships come into play, to allow

community preparedness to occur, as a part of regional preparedness, and State preparedness, all fitting into the national picture.

Senator AKAKA. You also mentioned the barriers between traditional first responders and hospital communities. Do you think that long-term plans by FEMA and HHS, as described by Mr. Baughman and Dr. Lillibridge, will help either of these concerns?

Dr. HANFLING. I do believe that, in the long-term, these gentlemen understand that this is a matter that is not going to be solved at the Federal level, and that these are issues that really require effective preparedness at the local level in order to mitigate them properly. I think that FEMA has taken tremendous steps in the last decade to prove that it is able to do that, but bioterrorism is different than a hurricane or an earthquake, and so we really have to focus, I think, at the local level, enhancing the local infrastructure, and really allowing the health-care community—that includes the medical community and the public health community—to be able to stand alone until those Federal assets are available, and we know that might take some time.

Senator AKAKA. A question to both of you: Some say one of the barriers for training for bioterrorism first-responders, mainly emergency room physician, nurses and emergency medical technicians, is that existing medical and nursing school training programs are so full, and time is limited. The question is how can we persuade medical and nursing schools that bioterrorism preparedness justifies dedicating resources and time to course curricula? Would you substitute bioterrorism training over other areas to ensure awareness?

Dr. O'Toole.

Dr. O'TOOLE. Well, health professionals learn all the time. I mean, it is part of their job, and I would target first not medical schools or nursing schools, because I think it is very difficult to get new curriculum subjects introduced into medical schools and nursing schools. I would target practicing physicians, and provide enough seed money to create some reliable continuing medical education credits for both physicians and nurses through their professional societies, which is how health professionals learn, and I think with that seed money, the Infectious Disease Society of America and the nursing associations and so forth will take it upon themselves to proliferate the original curriculum.

We have been having discussions—I know CDC has been having discussions—with professional groups. I know OEP has been talking to the emergency physicians' professional societies, and the problem with all of these groups is the initial seed money to develop the first core curriculum, but then everybody can go out and share, whether it is in San Francisco or Mississippi. So I think monies for professional curriculums and putting them in the hands of the appropriate professional societies would be the way to go. I think that training component is very important.

Dr. HANFLING. I think I would echo what Dr. O'Toole has stated. In the context of the American College of Emergency Physicians' evaluation of this very issue, they found that funding and time constraints were the biggest barriers to getting effective training curricula to the designated health-care professionals. I think that certainly in the context of the existing medical and nursing school cur-

ricula, which are already so chock-full of absolute requirements, it might be hard to carve additional time out of what is already a robust schedule. But certainly those who begin to practice would be the appropriate group of folks to target this information. One additional means of making that information attractive and imperative, would also be to focus on hospital CEOs and administrators, who do have a certain impact on the medical staffs of their respective institutions, and get them to champion these as important issues for the safety, not only of their hospitals and the well-being of their health systems, but also of the communities in which they serve.

Senator AKAKA. Thank you very much.

Senator Cochran, would you have any more questions or comments to make?

Senator COCHRAN. Mr. Chairman, I do not, except to thank you for convening the hearing. I think it is a very important subject for us to consider, particularly in light of the new initiatives the administration is pushing to try to get better control over the way we are organized, to deal with and respond to these problems, to understand them, and having the vaccines in the quantities that we need to deal with some of these emergency situations. I think we are moving in the right direction.

Senator AKAKA. Thank you. I think so, too. I would like to thank our witnesses, Dr. O'Toole and Dr. Hanfling, and I want to thank my friend and colleague, Senator Cochran, for being here this afternoon and for your cooperation in this effort. Today's testimony has given us much to think about and consider. I have heard three underlying concerns that need to be met to properly prepare for bioterrorism: First, the medical and hospital community needs to be more engaged in bioterrorism planning; second, the partnership between medical and public health professionals needs to be strengthened; and, third, hospitals must have the resources to develop surge capabilities. The first two concerns can be addressed through a coordinated national terrorism policy, as being developed by FEMA. The last concern is more complicated and will require substantial changes to our health care system. I look forward to working with all the different stakeholders in their efforts to prepare our communities for an act of bioterrorism.

I do not have any further questions. However, Members of this Subcommittee may submit questions in writing for any of the witnesses. We would appreciate a timely response to those questions. The record will remain open for these questions and for further statements by my colleagues. I would like to express my sincere appreciation once again to all the witnesses for their time and for sharing their insights with us this afternoon. This hearing is adjourned.

[Whereupon, at 3:28 p.m., the Subcommittee was adjourned.]

APPENDIX

STATEMENT OF

BRUCE P. BAUGHMAN

DIRECTOR

PLANNING AND READINESS DIVISION

READINESS, RESPONSE, AND RECOVERY DIRECTORATE

FEDERAL EMERGENCY MANAGEMENT AGENCY

BEFORE THE

SUBCOMMITEE ON INTERNATIONAL SECURITY, PROLIFERATION, AND FEDERAL SERVICES

COMMITTEE ON GOVERNMENTAL AFFAIRS

U.S. SENATE

JULY 23, 2001

Introduction

Good morning, Mr. Chairman and Members of the Subcommittee. I am Bruce Baughman, Director of the Planning and Readiness Division, Readiness, Response, and Recovery Directorate, of the Federal Emergency Management Agency (FEMA). Director Allbaugh regrets that he is unable to be here with you today. It is a pleasure for me to represent him at this very important hearing on bioterrorism. I will describe how FEMA works with other agencies, our approach to dealing with an act of biological terrorism, our programs related to terrorism, and the role of the new Office of National Preparedness.

How We Work with Other Agencies

The FEMA mission is to reduce the loss of life and property and protect our nation's critical infrastructure from all types of hazards. As staffing goes, we are a small agency. Our success depends on our ability to organize and lead a community of local, state, and Federal agencies and volunteer organizations. Our experiences in responding to natural disasters have taught us who to bring to the table and what questions to ask so that we may facilitate managing a wide range of emergencies. We provide management framework and the financial resources to help state and local governments meet the needs of their communities.

The Federal Response Plan (FRP) is the heart of that framework. The Federal Response Plan reflects the labors of interagency groups that meet as required in Washington, D.C. and all 10 FEMA Regions to develop our capabilities to respond as a team. This team is made up of 26 Federal departments and agencies and the American Red Cross, and is organized into interagency functions based on the authorities and expertise of the members and the needs of our counterparts at the state and local level.

Since 1992, the Federal Response Plan has been the proven framework time and time again, for managing major disasters and emergencies regardless of cause. It works during all phases of a disasters, including readiness, response, recovery, and mitigation. The framework is successful because it builds upon the existing professional disciplines and communities among agencies. Among Federal agencies, FEMA has the strongest ties to the emergency management and the fire service communities. We plan, train, exercise, and operate together. That puts us in position to manage and coordinate programs that address their needs. Similarly, the Department of Health and Human Services (HHS) has the strongest ties to the public health and medical communities, and the Department of Justice has the strongest ties to the legal and law enforcement communities. The Federal Response Plan respects these relationships and areas of expertise to define the decision-making processes and delivery systems to make the best use of available resources.

The Approach to Bioterrorism

We recognize that a biological scenario presents unique challenges. While the traditional first responders are police, fire, and emergency medical services, in a covert release of a biological agent the 'first responders' will be hospital staff, medical examiners, private physicians, or animal control workers. While I defer to the Departments of Justice and HHS on how biological scenarios would unfold, it seems unlikely that terrorists would warn us of a pending biological attack. In exercise and planning scenarios, the worst-case scenarios begin undetected and play out as epidemics. Response would begin in the public health and medical community. Initial requests for Federal assistance would probably come through health and medical channels to the Centers for Disease Control and Prevention (CDC). Conceivably, the situation could escalate into a national emergency.

HHS leads the efforts of the health and medical community to plan and prepare for a national response to a public health emergency. FEMA works closely with the Public Health Service, as the primary agency for the Health and Medical Services function of the Federal Response Plan. FEMA relies on the Public Health Service to bring HHS experts to the table when the Federal Response Plan community meets to discuss biological scenarios. We are collaborating with public health staff at HHS and other health and medical agencies to learn from their expertise about potential biological threats, how they spread, and the resources and techniques that will be needed to control them. By the same token, the experts are learning from us about the Federal Response Plan and how we can use the framework to work management issues, such as resource deployment and public information strategies. The Federal Response Plan alone is not an adequate solution to the needs of the health and medical community in planning and preparing for a deadly epidemic or act of bioterrorism. It is also true that the health and medical community alone cannot devise an adequate solution to the problem of managing an emergency with biological causes.

In recent years, Federal, state and local governments and agencies have made progress in bringing the communities closer together. Exercise Top Officials (TOPOFF) 2000 in May 2000 involved two concurrent terrorism scenarios in two metropolitan areas of the United States. One of those scenarios was bioterrorism. We are still working on the lessons learned from that exercise. We need time and resources to identify, develop, and incorporate changes to the system between exercises. Exercises, when conducted properly and in moderation, are critical in helping us to prepare for scenarios we will rarely face. In January 2001, the FBI and FEMA jointly published the U.S. Government Interagency Domestic Terrorism Concept of Operation Plan (CONPLAN) with HHS and our other common support agencies, and pledged to continue the planning process to develop specific procedures for different scenarios, including bioterrorism. The Federal

Response Plan and the CONPLAN provide the framework for managing the response to an act of bioterrorism.

Synopsis of FEMA Programs

The overall Federal planning effort is being coordinated with the FBI, using existing plans and response structures whenever possible. The FBI is always the Lead Agency for Crisis Management. FEMA is always the Lead Agency for Consequence Management. We have developed plans and procedures to explain how to coordinate the two operations before and after consequences occur. In 1999, we published the second edition of the FRP Terrorism Incident Annex. In 2001, the FBI and FEMA published the United States Government Interagency Domestic Terrorism Concept of Operations Plan (CONPLAN). There are two exceptions:

- In the planning arena, we continue to work with other Federal agencies to develop deployment packages for managing the consequences in specific scenarios.

- In the training arena, we recently concluded an agreement with the CDC to develop and deliver a version of our Integrated Emergency Management Course (IEMC) and other courses to focus specifically on public health issues that an act of bioterrorism would generate. We plan a pilot offering of the joint FEMA/CDC course in September, using a plague scenario.

Planning

The overall Federal planning effort is being coordinated with the FBI, using existing plans and response structures whenever possible. The FBI is always the Lead Agency for Crisis Management. FEMA is always the Lead Agency for Consequence Management. We have developed plans and procedures to explain how to coordinate the two operations before and after consequences occur. In 1999, we published the second edition of the FRP Terrorism Incident Annex. In 2001, the FBI and FEMA published the United States Government Interagency Domestic Terrorism Concept of Operations Plan (CONPLAN).

We continually validate our planning concepts by developing plans to support the response to special events, such as we are now doing for the 2002 Olympic Winter Games that will take place in Utah.

FEMA maintains the Rapid Response Information System (RRIS), which provides online access to an inventory of key Federal assets that could be made available to assist state and local response efforts, and a database on chemical and biological agents and protective measures.

In FY 2001, FEMA is distributing $16.6 million in terrorism consequence management preparedness assistance grants to the States to support development of terrorism related capabilities. FEMA is developing additional guidance to provide greater flexibility for states on how they can use this assistance.

FEMA and the National Emergency Management Association jointly developed the Capability Assessment for Readiness (CAR), a self-assessment tool that enables States and Territories to focus on 13 core elements that address major emergency management functions. It assesses terrorism preparedness relative to planning, procedures, equipment and exercises. FEMA's CAR report presents a composite picture of the nation's readiness based on the individual State and Territory reports.

FEMA has developed a special attachment to its all-hazards Emergency Operations Planning Guide for state and local emergency managers that addresses developing terrorist incident annexes to state and local emergency operations plans. This planning guidance was developed with the assistance of eight Federal departments and agencies in coordination with the National Emergency Management Association and the International Association of Emergency Managers.

Training

In the area of training, FEMA uses the National Emergency Training Center, which includes the National Fire Academy (NFA) and the Emergency Management Institute (EMI), as well as state fire and emergency management training systems, to deliver terrorism-related training to state and local responders. FEMA emphasizes a "train-the-trainer" approach and uses distance-learning technologies such as the Emergency Education Network to maximize our training capabilities.

The NFA has developed and fielded several courses in the *Emergency Response to Terrorism (ERT)* curriculum, including a Self-Study course providing general awareness information for responding to terrorist incidents that has been distributed to some 35,000 fire/ rescue departments, 16,000 law enforcement agencies, and over 3,000 local and state emergency managers in the United States and is available on FEMA internet site. Other courses in the curriculum deal with Basic Concepts, Incident Management, and Tactical Considerations for Emergency Medical Services (EMS), Company Officers, and HAZMAT Response. Bioterrorism is included as an integral part of these courses.

Over one thousand ERT instructors representing every state and major metropolitan area in the nation have been trained under this program. The NFA is utilizing the Training Resources and Data Exchange (TRADE) program to reach all 50 States and all major metropolitan fire and rescue departments with training materials and course offerings. In FY 2001, FEMA is distributing $4 million in grants to state fire training centers to deliver first responder courses developed by the NFA.

Over 112,000 students have participated in ERT courses and other terrorism-related training. In addition, some 57,000 copies of a Job Aid utilizing a flip-chart format guidebook to quick reference based on the ERT curriculum concepts and principles have been printed and distributed.

NFA is developing a new course in FY 2002 in the Emergency Response to Terrorism series geared toward response to bioterrorism in the pre-hospital recognition and response phase. It will be completed with the review and input of our Federal partners, notably HHS and the Office of Justice Programs.

EMI offers a comprehensive program of emergency management training including a number of courses specifically designed to help communities, states, and tribes deal with the consequences of terrorism and weapons of mass destruction. The EMI curriculum includes an Integrated Emergency Management Course (IEMC)/Consequences of Terrorism. This 4 ½ day course combines classroom training, planning sessions, and functional exercises into a management-level course designed to encourage communities to integrate functions, skills, and resources to deal with the consequences of terrorism, including terrorism. To foster this integration, EMI brings together 70 participants for each course that includes elected officials and public health leaders as well as representatives of law enforcement, emergency medical services, emergency management, and public works. The course provides participants with skill-building opportunities in preparedness, response, and recovery. The scenario for the course changes from offering to offering. In a recent offering, the scenario was based on an airborne anthrax release. Bioterrorism scenarios emphasize the special issues inherent in dealing with both infectious and noninfectious biological agents and stresses the partnerships between local, state, and Federal public health organizations.

Exercises

In the area of exercises, FEMA is working closely with the interagency community and the States to ensure the development of a comprehensive exercise program that meets the needs of the emergency management and first responder communities. FEMA is planning to conduct Phase II of a seminar series on terrorism preparedness in each of the ten FEMA Regional Offices. In addition, exercise templates and tools are being developed for delivery to state and local officials. Lessons learned from the chemical stockpile emergency preparedness, radiological emergency preparedness, and hazardous materials preparedness programs are also reviewed to strengthen terrorism preparedness capabilities.

The Role of the Office of National Preparedness

On May 8, 2001, President Bush asked the Vice President to oversee the development of a coordinated national effort on Domestic Preparedness Against Weapons of Mass Destruction. The President also asked the FEMA Director, Joe Allbaugh to create an Office of National Preparedness (ONP) to coordinate all federal programs dealing with weapons of mass destruction consequence management. The ONP is not intended to take over any individual agency program or function.

The mission of the ONP is support a comprehensive emergency preparedness and response capability for dealing with the consequences of WMD incidents within the United States. Based on the President's desire that Federal efforts be integrated,

harmonious, and comprehensive, the ONP will focus its efforts on the coordination of preparedness programs and activities focused on developing, building and maintaining the national capability to manage the consequences of terrorism involving WMD.

To accomplish this mission, the ONP will function as an interagency organization to:

- Support the implementation of those results of the Vice President's effort dealing with consequence management.
- Coordinate all Federal programs dealing with WMD consequence management within FEMA and other key departments and agencies.
- Solicit input and advice from local and state first responder and emergency management organizations regarding the continued development, building and sustainment of the national capability.
- Support the building of an integrated local, state, and Federal preparedness and consequence management capability involving planning, training, exercises, equipment acquisition, research and development, expert advice and other areas.
- Work with involved Federal departments and agencies to review programs, identify gaps and recommend changes.
- Make information on consequence management preparedness and response programs and activities readily available to local, state and Federal responders.

The ONP was established at FEMA Headquarters earlier this month with an initial staffing element. An ONP element is also being created in each of the ten FEMA Regional Offices to support these activities involving the States and localities. As the structure and activities of the ONP evolve, the staff will be augmented from within FEMA as well as from departments and agencies and local and state organizations

Conclusion

Mr. Chairman, you convened this hearing to ask about our approach to bioterrorism. It is FEMA's responsibility to ensure that the national emergency management system is adequate to respond to the consequences of catastrophic emergencies and disasters, regardless of cause. All catastrophic events require a strong management system built on expert systems for each of the operational disciplines. Bioterrorism presents tremendous challenges. Experts will tell you that it is not statistically patterned, because there are so many variables involved. Without patterns it is difficult to prepare hazard-specific response plans and program plans with a high degree of confidence. We rely on the agencies and offices of the Department of Health and Human Services to advise the health and medical community in addressing the health and medical aspects of this

problem. Without question, they need support to further strengthen their detection and reporting capabilities and their operating capacity in emergency medicine. FEMA must ensure that the national system has the tools to gather information, set priorities, and deploy resources effectively in a biological scenario. In recent years we have made tremendous strides in our efforts to increase cooperation between the health and medical community and the emergency management community. We need to do more.

The creation of the new Office of National Preparedness enable us to better focus our time and effort with the first responder and emergency management communities to prepare the nation for response to any incident.

Thank you, Mr. Chairman. I would be happy to answer any questions.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Washington, D.C. 20201

STATEMENT OF

SCOTT R. LILLIBRIDGE, M.D.

SPECIAL ASSISTANT TO THE SECRETARY

DEPARTMENT OF HEALTH AND HUMAN SERVICES

FOR

NATIONAL SECURITY AND EMERGENCY MANAGEMENT

BEFORE THE

COMMITTEE ON GOVERNMENTAL AFFAIRS

UNITED STATES SENATE

July 20, 2001

Mr. Chairman and Members of the Committee, thank you for inviting me here today to discuss activities of the Department of Health and Human Services (HHS) in responding to Bioterrorism, other emergencies, and acts of terrorism. I am Scott Lillibridge, Special Assistant to the Secretary of HHS for National Security and Emergency Management. I have a long history of emergency management experience with this Department that ranges from service to victims of civil wars in Africa to terrorism response following the Sarin attack in Tokyo. Domestically, I have worked with the Federal Emergency Management Agency (FEMA) at the state and local level during Federal mobilizations to more than a dozen states. Prior to this new assignment, I served as the Director of the Bioterrorism Preparedness and Response Program, National Center for Infectious Disease, Centers for Disease Control and Prevention (CDC).

On July 10, 2001, Secretary Tommy Thompson appointed me to this position and directed me to begin creating a unified HHS preparedness and response system to deal with these important issues. I would like to discuss that effort with you today, highlighting some of the ways that HHS works with the Federal Emergency Management Agency, other Federal Agencies, and our partners at the state and local level.

Among weapons of mass destruction, Bioterrorism features several characteristics that set it apart from other acts of terrorism involving, for example, explosives or chemical agents. First, biological agents are easy to conceal. A small amount may be sufficient to harm large populations and cause epidemics over a broad geographic region. Second, the contagious nature of infectious diseases means that once persons are exposed and infected they can continue to spread the disease to others. Third, in the most worrisome scenario of a surreptitious attack, the first responders are likely to be health professionals in emergency rooms, physician offices,

outpatient clinics, public health settings, and other health-care activities rather than the traditional first responders. The longer the terrorist-induced epidemic goes unrecognized and undiagnosed, the longer the delay in initiating treatment and other control efforts to prevent further infectious outbreaks.

The Special Assistant for National Security and Emergency Management is located in the Immediate Office of the Secretary (IOS) and I have been tasked to coordinate and provide executive leadership and organizational direction for HHS budget, policy and program implementation related to these important issues. Within HHS, the Office of Emergency Preparedness (OEP) coordinates emergency response preparedness activities and works with other federal agencies, including the Federal Emergency Management Agency (FEMA) and the Departments of Justice (DOJ) and Defense (DOD). Other Agencies within HHS that play a key role in our Department's overall Bioterrorism preparedness include the Centers of Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), and the National Institutes for Health (NIH). HHS is the primary agency responsible for the health and medical response under FEMA's Federal Response Plan (FRP). This plan provides HHS with a framework to respond with FEMA and 26 other Federal departments and agencies, along with the American Red Cross.

HHS also coordinates and provides health leadership to the National Disaster Medical System (NDMS). NDMS is a partnership that brings together HHS, DOD, FEMA, the Department of Veterans Affairs (VA). It was envisioned to provide medical response, patient evacuation, and definitive medical care for mass casualty events. This system addresses both disaster situations and military contingencies. More than 7,000 private citizens across the country volunteer their

time and expertise as members of response teams to support this effort. This system also includes approximately 2,000 participating non-federal hospitals. VA and DOD's expertise and resources are critical to many key aspects of NDMS response, and I would note that these Departments have distinguished themselves on many occasions.

Bioterrorism Preparedness and Response

The Department of Justice, acting through the FBI, is the overall Federal lead agency for managing the Federal response to a terrorist incident or threat, as well as the lead agency in charge of crisis management during a terrorist event or a credible threat to public safety. HHS provides technical assistance to the FBI during all phases of threat assessment and alerts law enforcement if the threat first appears in the health arena in the form of unexplained illness or death. FEMA is the lead federal agency in charge of consequence management. As in other types of disaster responses under the Federal Response Plan, FEMA would request HHS to provide necessary health, medical and health-related services to the victims. This occurs most often through the use of key components of the National Disaster Medical System I have just described.

The broad goals of national response to Bioterrorism, or any epidemic involving a large population will be to detect the problem, control the epidemic's spread and treat the victims. The Department's approach to this challenge has been to strengthen public health infrastructure to deal more effectively with epidemics and other emergencies, and to hone our emergency health and medical response capacities at the federal, state and local level. HHS has also worked to forge new partnerships with organizations related to national security.

As an example of building a public infrastructure, HHS has awarded grants to states to

enhance the key elements of detection and control of infectious diseases. Other HHS efforts have included the development of a national pharmaceutical stockpile, the development of a CDC Bioterrorism Preparedness and Response Program, and the efforts of OEP to improve local medical readiness. In most localized disasters, HHS organizes its medical field response through the Office of Emergency Preparedness, using a team structure. Teams can include Disaster Medical Assistance Teams, specialty medical teams (such as burn, pediatric, mortuary), and Disaster Mortuary Teams. In addition, National Medical Response Teams are able to deploy to sites anywhere in the country with a supply of specialized pharmaceuticals to treat up to 5,000 patients. Currently, HHS can draw on 27 such teams that can be federalized and deployed to assist victims. Such teams have been sent to many areas in the aftermath of disasters in support of FEMA-coordinated relief activities. HHS, through OEP, will mobilize NDMS resources, the Public Health Service's Commissioned Corps Readiness Force, as well as enlist the support of other federal agencies, such as DOD and VA, to help provide the needed medical and public health services to ensure the continued health of the disaster victims. In the last few years these assets were deployed to New York, Florida, Texas, Louisiana, Alabama, Mississippi, the Virgin Islands and Puerto Rico in the aftermath of hurricanes and tropical storms.

However, regional or national response to a health emergency involving Bioterrorism will also require that additional capacities be in place at the state and local level before the disaster strikes. HHS, primarily through CDC, is supporting state and local governments to strengthen their surveillance, epidemiological investigation and laboratory detection capabilities, as well as continuing development of a national stockpile of critical pharmaceuticals and vaccines to supplement local and state resources.

The Office of Emergency Preparedness is working on a number of fronts to assist local hospitals and medical practitioners to deal with the effects of Bioterrorism and other terrorist acts.

Since Fiscal Year 1995, HHS through OEP has been developing Medical Response Systems (MMRS). This initiative enhances the existing local and city systems capability to respond to a chemical or biological incident and provide triage, medical treatment, and patient decontamination. The city systems that have been developed to help address the medical needs of victims from terrorism and to facilitate the transport of patients to hospitals. Affiliated hospitals are developing procedures to ensure that arriving patients would be decontaminated before entering the facility. To date, OEP has contracted with 72 of the Nation's largest metropolitan areas for MMRS development and will initiate an additional 25 contracts during this fiscal year. OEP is working with entities such as the American College of Emergency Physicians and the American Hospital Association to enhance the clinical preparedness.

Training

HHS to prepare the health and medical community for contingencies such as Bioterrorism and other terrorism events has used classroom training, distance learning, and hands-on training activities. For example, in Fiscal Year 1999, Congress appropriated funds for OEP to renovate and modernize the Noble Army Hospital at Ft. McClellan, Alabama, so the hospital can be used to train doctors, nurses, paramedics and emergency medical technicians to recognize and treat patients with chemical exposures and other public health emergencies. Expansion of the Bioterrorism component of Noble Training Center curriculum is a high priority for HHS. In addition, the Department envisions a strong linkage to the adjacent Department of Justice, Office

of Justice Programs (OJP) training facility for first responders. We have been working closely with the OJP's National Domestic Preparedness Consortium and we will continue our excellent relationship with them. OJP and HHS have teamed together to develop a healthcare assessment tool and have also delivered a combined MMRS/first responder training program. CDC has participated with DOD most notably to provide distance-based learning for Bioterrorism and disease awareness to the clinical community. CDC is now moving to expand such training with organizations such as the Infectious Disease Society of America (IDSA) and schools of public health such as the Johns Hopkins Center for Biological Defense. HHS is also aware of the fine training programs that currently exist within FEMA. The recent FEMA-CDC initiative to expand the scope of FEMA's Integrated Emergency Management Course (IEMC) will serve as a vehicle to integrate the emergency management and the health community response efforts in a way that has not been possible in the past. It is clear that these communities can best respond together if they are able to train together toward realistic scenarios that leverage the best of both organizations. FEMA's leadership and collaboration has been critical to success in this effort.

National Preparedness for Bioterrorism

An indication of the Nation's preparedness for Bioterrorism was provided by the congressionally mandated Top Officials (TOPOFF) 2000 Exercise in May 2000. This national drill involved scenarios related to a weapons-of-mass-destruction-attack against our populations. However, the exercise's simulated plague outbreak in Denver is most important to our discussion today. This exercise involved state and local community, FEMA, DOJ, HHS, DOD and many other vital community sectors that would play a role in such a response. While much progress has been made to date, a number of important lessons from that event have begun to

shape our planning notions about Bioterrorism preparedness and response in the health and medical area. They are as follows:

- Improving the public health infrastructure remains a critical focus of the Bioterrorism preparedness and response efforts. Such preparedness is indispensable for reducing the Nation's vulnerability to terrorism using infectious agents and other potential emergencies through the development of broad public health capacities.
- In this Nation, we have extremely limited surge capacity in our healthcare system. Local health care systems must be able to expand their health care capacity rapidly in the face of mass casualties. This must be part of our overall preparedness effort for infectious diseases and other major health emergencies.
- Local communities will need assistance with the distribution of stockpile medications and will greatly benefit from additional planning related to epidemic response.
- It will be extremely important to link emergency management services and health decision making at the state and local level for the purpose of rapidly addressing the needs of large populations affected by an epidemic. Training health workers to understand emergency management tools like the Incident Command System (ICS) is an example of the type of effort that will be important in closing this gap.
- Ensuring that the proper legal authorities exist to control the spread of disease at the local, state and Federal level and that these authorities can be exercised when needed. This will be important to our efforts to control the spread of disease.
- Lastly, Federal "response partners" in the health and medical arena need to design response contingencies that specifically address the needs of victims of large-scale

epidemics

Priorities for HHS

HHS is moving to develop a system of emergency management, communications, planning and training to ensure an efficient "One Department" emergency response to states and local communities. Our Secretary is committed to this task. Once these capacities are in place we will build better linkage with the interagency community and our state and local partners as we move toward these preparedness objectives.

HHS, through CDC, needs to expand its cooperative agreements to health departments to enhance state and local preparedness for Bioterrorism. Our Nation's surveillance networks need to extend beyond the boundaries of the public health departments if we are to ensure the timeliest, most effective detecting and reporting of disease outbreaks. The strategy to accomplish these tasks should be better defined and expanded to include non-traditional sources of information about the community, such as 1) reasons for emergency department visits, 2) more detailed information about the nature of 911 calls, 3) timely data concerning health services utilization such as the number of hospital beds that are currently in use, and perhaps, 4) information concerning the purchase of specific products or commodities at pharmacies that suggest an increase in certain types of illnesses within the population.

Expansion of the Laboratory Response Network (LRN) will augment our effectiveness in dealing with Bioterrorism. This network is a partnership among the Association of Public Health Laboratories (APHL), CDC, FBI, State Public Health Laboratories, DOD and the Nation's clinical laboratories. This will include additional training in laboratory methods, the development of new rapid assays, and the implementation of new technologies in public health and clinical

laboratories. The communication and training capacities of the Health Alert Network will be needed for distance-based learning and the rapid notification of health departments. In the near future, as part of its responsibility associated with the National Disaster Medical System, HHS must begin to broaden its perspective to address issues related to health facility preparedness in civilian communities. It is also time to review the roles and responsibilities between NDMS partners to see how they match against the new threats facing our Nation.

Conclusion

The Department of Health and Human Services is committed to ensuring the health and medical care of our citizens. We are prepared to quickly mobilize the professionals required to respond to a disaster anywhere in the United States and its territories and to assist local medical response systems in dealing with extraordinary situations, and we are actively preparing for the challenge posed by acts of Bioterrorism. At the end of my first week at this new post it is clear that close ties between HHS, FEMA and DOJ will be paramount in addressing the consequences of Bioterrorism and other terrorist incidents. I look forward to this challenge.

Mr. Chairman, that concludes my prepared remarks. I would be pleased to answer any questions you may have.

Congress of the United States
U.S. Senate
Government Affairs Subcommittee on International Security, Proliferation and Federal Services

HEARING ON FEMA'S ROLE IN MANAGING BIOTERRORIST ATTACK AND THE IMPACT OF PUBLIC HEALTH CONCERNS ON BIOTERRORISM PREPAREDNESS
July 23, 2001

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Mr. Chairman, Distinguished Members of the Committee:

Thank you for the opportunity to appear before you to discuss the role of the Federal Emergency Response Agency (FEMA) in preparing the nation to respond effectively to possible acts of bioterrorism. My name is Tara O'Toole. I am a physician and public health professional and Deputy Director of the Johns Hopkins University Center for Civilian Biodefense Studies. From 1993-97 I served as Assistant Secretary of Energy for Environment Safety and Health. I have spent much of my professional life working to prevent and prepare to respond to industrial accidents, including accidents in the US nuclear weapons complex.

Nothing in the realm of natural catastrophes or man-made disasters rivals the complex response problems that would follow a bioweapons attack against civilian populations. FEMA is one of government's organizational success stories. It has brought comfort and vital help to millions of people struggling to recover from earthquakes and hurricanes and floods and any number of other major calamities. Preparing to respond to a biological weapons attack, however, presents different issues, requires the engagement of different sets of responders and response organizations, and will depend on different institutional capacities than are evoked by natural disasters or acts of terrorism like the Oklahoma City bombing.

Today I will briefly describe the nature of a bioterrorist attack, outline what in my judgment are some of the major issues FEMA must confront in its role as coordinator of all Federal programs dealing with weapons of mass destruction consequence management, and suggest initial steps towards addressing some of these challenges.

I will emphasize three areas that are central to an effective response to a deliberate, bioterrorist- induced epidemic and which I and my colleagues at Johns Hopkins think are particularly problematic and in need of attention:

- Vulnerabilities within the "critical infrastructures" of sectors which are key to bioterrorism response – namely, the US medical care system and public health agencies;

- The absence or insufficiency of essential vaccines and effective drugs to treat the major bioweapons agents;

- Decision-makers' lack of familiarity with the principles of infectious disease control, public health practice, and the operational capacities and limitations of key sectors and organizations involved in bioterrorism response.

Some of these problems can be addressed, at least in part, by FEMA, whose exemplary record of managing complicated situations will stand it in good stead. Other problems integral to bioterrorism response are beyond the reach of any single agency. Some problems demand collaboration among several different organizations and some will only yield to the sustained and concerted attention of Congress and the Administration.

Biological weapons represent a strategic threat to the United States. In the words of Admiral Stansfield Turner, former Director, Central Intelligence Agency, only bioweapons and nuclear weapons have the potential to bring the United States "past the point of non-recovery". [Caging the Genie] In coming years, the potency, diversity and accessibility of biological weapons will increase as biological science advances and the number of people knowledgeable in these fields increases. Ensuring the nation's ability to respond to bioweapons attacks in ways that limit death and suffering while preserving US strategic flexibility and fundamental American values and civil liberties are essential to bioterrorism response. An effective response capacity may also serve to deter such attacks.

The Nature of a Bioterrorist Attack and the Problems of Response

The consequence of a bioterrorist attack would be an epidemic. The "first responders" to such an event would be doctors, nurses and public health professionals in city and state health departments. A covert bioterrorist attack would likely come to attention gradually, as physicians became aware of an accumulation of inexplicable deaths among previously healthy people. The speed and accuracy with which doctors and laboratories reached correct diagnoses and reported their findings to public health authorities would directly affect the number of deaths. If the bioweapons used were a contagious disease – capable of being transmitted from one person to another – the ability to limit illness and death would depend critically on decisions made and actions taken in the hours and days immediately following discovery of the attack.

The early symptoms of most of the pathogens thought likely to be used as bioweapons resemble those of common illnesses. Once a bioterrorist attack is recognized and announced by the media, people all over the country are likely to fear that they or their families have been made ill by a deadly bioweapons and will seek medical care. It is quite possible, and indeed likely, that such a surge in patient demand will overwhelm

local health care systems. Like all "dread" risks, a bioweapons attack would be silent, odorless and invisible. No one would know if they were infected until they became ill. People with other, naturally occurring illnesses might well fear they were victims of the attack. Large numbers of anxious people would be expected to flood into doctors' offices and emergency departments.

Most medical laboratories could not rapidly distinguish those actually infected with a bioweapons agent from persons with other diseases – a situation that will deepen the stress on the health care system and complicate rational distribution of scarce vaccines and medicines. During the 1999 outbreak of West Nile Virus – which resulted in a total of 62 cases of illness – the US laboratory capacity for diagnosing viral illnesses was tapped out.

Vulnerabilities in the US Medical Care System

The US health care system is operationally fragile and inelastic. The quest for financial efficiency within the health care sector coupled with the financial pressures imposed by managed care, rising drug prices, regulatory mandates, etc. have virtually eliminated hospital surge capacity. Nurses, medicines and equipment are all managed in accord with "just-in-time" models. Although a hospital may be certified to operate a certain number of unoccupied beds, the staff available to care for patients is limited. Shortages of nurses in particular are serious, widespread and expected to worsen. Were a bioterrorist attack to occur, we could expect that some health care workers would fail to come to work, worsening the already strained staffing situation in health care.

Even small increases in demand are enough to bring hospitals to the point of crisis. The mild and brief 1999 flu season caused cancellation of elective surgery and required three quarters of Los Angeles hospitals to re-route ambulances because emergency rooms were too full to accept additional patients. The number of days Maryland emergency rooms spent on bypass doubled every year for the past three years. [USA Today, Feb. 4, 2000, p.6A, "ER Conditions: Critical"] News reports in the past year have documented over-crowded emergency rooms and long waits for care in Boston, St. Louis, Chicago and New York. In the past decade, the US lost over 1000 emergency rooms (they tend to be money-losers). At the same time, the number of people seeking care in emergency rooms rose by about 50%. [Washington Post, April 22, 2001, p. B1, "A State of Emergency"]. Following a fire in a high-rise apartment building, the Maryland's Secretary of Health determined that the state – home to more than 60 hospitals, including two major academic medical centers – would be unable to handle an emergency that produced 100 patients needing ventilators.

The lack of surge capacity in American hospitals is such that few, if any, hospitals could handle a sudden influx of 100 patients needing advanced life-support care. In most locales, even the combined resources of all hospitals in a metropolitan area could not handle such a demand. No city in America, and no contiguous geographic region could handle 1000 patients suddenly needing advanced medical care.

The majority of hospitals currently lack models plans or templates that would guide institutional response during a bioterrorism crisis. Such templates need to be developed for different settings (large academic medical centers, community hospitals, rural facilities, etc.). Community-wide response plans that incorporate specific hospital capacities into a single coordinated response are also needed. Modern hospitals are autonomous organizations, which are unused to collaboration with other hospitals or institutions. Communications and data-sharing linkages that could connect hospitals and HMOs with local and state public health agencies are urgently needed.

Local and State Public Health Capacities

The operational capacity of state and local public health agencies to track the epidemic will have a critical bearing on FEMA's ability to coordinate an effective response. Governmental decision-makers' "situational awareness" will depend on public health data: how many are sick, where they are located, what the victims shared in common (and hence where or how the attack might have occurred), whether the number of afflicted is growing, whether there was more than one attack, projected numbers of deaths, etc. – all these questions depend on public health agencies' ability to gather and analyze vital information. Yet state health agencies have been under funded and understaffed for decades, and have less potential surge capacity than do hospitals.

The Director of the Federal Centers for Disease Control and Prevention (CDC) noted last fall that many state health officials lack access to computers. Many local county health departments do not have access to the Internet. Since FY 2000, HHS has provided bioterrorism preparedness grants to state health departments. These funds are being used to create fundamental response capacities in areas such as disease surveillance and laboratory analysis. This is a critical program, but accounts for only $40 million annually – a paltry amount given the importance of public health infrastructure to bioterrorism response and the urgent need to refurbish long neglected health departments.

CDC can supplement local health agencies to some degree. In 1999, CDC initiated the Office for Bioterrorism Preparedness and Response, which has made significant strides in supporting states' efforts to identify and build critical epidemic response functions. HHS has made an effort to create expertise and response capacity in recent years, and Secretary Thompson's recent appointment of a special assistant in charge of bioterrorism is a welcome step forward. But CDC's own lack of surge capacity is not well appreciated. There are fewer than 150 officers in the CDC Epidemic Intelligence Service. Perhaps one or two thousand other CDC employees with some (however distant) field experience could be mobilized in a time of national crisis. The CDC Office of Bioterrorism Response and Preparedness has about 30 employees, but many of these are "matrixed" throughout the agency and have duties beyond bioterrorism issues.

HHS' Office of Emergency Preparedness also has important responsibilities pertinent to bioterrorism response, notably the management of the Metropolitan Medical Response System (MMRS) which is part of the Federal government's overall Domestic Preparedness Program. The role and function of the MMRS needs to be clarified. In some

locales, the MMRS is reported to be working well, while the lack of engagement by the medical community and confusion about its functions hampers acceptance elsewhere. *Whenever possible, preparations for bioterrorism response should be integrated into routine medical and public health functions.* Given the urgent and competing demands levied upon the medical and public health communities, the resources needed to build effective epidemic response capabilities must serve "dual uses". Moreover, systems that are used only in rare emergencies seldom work as planned. For example, it should be possible, with planning and foresight, to construct for example, disease reporting systems that routinely track and help prevent medical errors and which can, in times of need, monitor epidemics.

The Need for More Effective Treatments and Vaccines

To date, Congress, the Administration and the media have focused primarily on organizational issues involved in bioterrorism response. Much attention has been directed towards questions of who (or what agency) is in charge, and how multi-agency functions should be coordinated and funded. Insufficient attention has been directed towards analyzing and preparing the concrete elements of the response itself. Epidemics are fundamentally different from other natural disasters and will demand very different responses than other types of "catastrophic terrorism". The scant attention paid to vulnerabilities in critical infrastructures of medicine and public health reflects this lack of focus on the response itself.

Some of the most critical epidemic response tools must be developed and readied long before a bioweapons attack occurs. The most efficient and well-coordinated organizational response to a bioweapons attack cannot compensate for a lack of effective medicines. If we do not have effective vaccines or sufficient doses of vaccines on hand to stop the spread of contagious disease, disease containment strategies will be limited and could involve at least temporary suspension of some civil rights. We now have effective vaccines or drugs treatments for only 12 of the 50 most serious pathogens thought to be likely bioweapons agents. [George Poste, "Biotechnology: Future Promise and Peril" delivered at 2nd National Symposium on Medical and Public Health Consequences of Bioterrorism, Washington, D.C., Nov.23, 2000.]

Just as the medical and public health systems do not have the ability to respond to rapid increases in demand, pharmaceutical and vaccine manufacturers also lack immediate surge capacity. HHS recently signed a contract with a private company to produce 40 million doses of smallpox vaccine by 2004; current supplies afford about 12-15 million doses. We would argue that 40 million doses is insufficient and that the country urgently needs a plan to produce vaccine on an emergent basis should it be needed.

Problems Associated with Decision Making and Epidemic Management

In May 2000, the Hopkins Center in collaboration with the ANSER Institute for Homeland Defense, the Center for Strategic and International Studies and the Oklahoma Memorial Institute for the Study of Terrorism held a bioterrorism exercise at Andrews

Air Force Base. The scenario called for a mock National Security Council to react to a fictional, moderately sized smallpox attack. High-level former government officials took the role of NSC members. Former Senator Sam Nunn played the President; David Gergan played the National Security Advisor; Governor Frank Keating played himself, Frank Wisner was Secretary of State; James Woolsey played CIA Director; John White played Defense Secretary; Dr. Margaret Hamburg was HHS Secretary; the Attorney General was played by George Terwilliger; William Sessions was FBI Director; and Jerome Hauer played FEMA Director.

One of the striking observations of this exercise was the unfamiliarity of these distinguished and experienced professionals with the basic decisions and trade-offs associated with managing the response to the epidemic. As one participant, who had spent his life in high-level national security positions remarked, " the issues were so unfamiliar I had a hard time wrapping my mind around the problems. I didn't know how to think about this." Another participant noted that the relatively slow evolution of the epidemic masked the need for drastic action. Most of the participants wanted information on which to base decisions that would not be available within existing institutional capabilities – e.g. immediate estimates of the size and likely spread of disease, etc.

The uncertainties and unfamiliarity of epidemic management also were evident in the June 2000 TOPOFF exercise. Participants in that very useful exercise commented that the deliberate, consensus-based mode of decision-making that is traditional within public health circles was dysfunctional in the setting of a fast-moving, lethal epidemic. Hospital leaders did not know who was in charge or whom to call for information or assistance. The law enforcement and public health realms of the exercise seemed to operate independently. There were several "joint operations centers". Different participants reported radically different notions of what decisions had been reached. Elected officials did not participate in TOPOOF so it is unclear if their presence would have improved decision processes or complicated them further.

In any case, a bioterrorism attack would represent a unique hybrid of a national security crisis and a public health emergency. Government is not experienced in dealing with the mix of issues that such a situation presents. The organizations involved in bioterrorism response follow different cultural styles, the individuals in leadership roles will likely not have worked together before, and top officials will be relying on the advice of experts they have never met, and making decisions about issues with which they are largely unfamiliar.

Suggestions for Improved Bioterrorism Response

1. Engage the Medical Community and Hospital Leaders in Planning for Bioterrorism Response

FEMA's leadership should immediately seek to engage leaders from the medical community, and from hospitals and hospital trade organizations in preparations for

bioterrorism response. Without the participation of leaders from the medical community and hospital associations, efforts to prepare to deal with epidemic disease are destined to fail.

Congress and the Administration should allocate resources to allow hospitals to undertake meaningful planning for bioterrorism response. Such funds could perhaps best be disbursed in the form of competitive grants program. Planning for community-wide bioterrorism response should be expanded to include hospitals and other deliverers of medical services.

Over the past year and a half, my colleagues at Johns Hopkins and I have worked with the American Hospital Association and the Office of Emergency Preparedness within the Department of Health and Human Services to better understand why representatives from the medical community and hospital leaders have not been engaged in local and federal counter terrorism preparedness initiatives. There are two main reasons.

First, leaders in the Congress and the Executive branch have not persuaded hospital leaders that bioterrorism represents a serious national security threat or that the medical care system is expected to play a significant response role should an attack occur. Second, the government has not instituted any mandates or provided any incentives that would encourage hospitals to divert scarce and precious resources towards bioterrorism preparation and planning.

The profound financial pressures on the institutional infrastructure of the US health care system are not well recognized. Thirty percent of all hospitals and half of academic medical centers are in the red. Hospitals and HMOs are not able to devote scarce resources to planning efforts unless the federal government makes it clear that such preparations are important and provides support for such endeavors.

2. Conduct Independent Analysis of Current Institutional Capabilities and Plans to Care for the Sick

FEMA, in collaboration with HHS and the Congress should initiate an independent assessment of the response capacity of US hospitals in the event of a bioterrorist attack. The capabilities, configuration and usefulness of the National Disaster Medical System (NDMS) and the Disaster Medical Assistance Teams (DMATs) in the wake of a bioterrorist attack should be investigated. A key component of the Federal Response Plan, the NDMS was created decades ago to care for victims of a possible nuclear war in Europe, and many question its current viability in the current health care climate. The operational capabilities, availability and practical utility of using Veterans Administration resources and Defense Department assets are also in need of careful, independent examination.

Without clear analyses of patient care capacity, it is impossible to prepare coherent plans for bioterrorism response. If, as we believe, the US health system possesses only very limited ability to meet sudden and sustained demands for care of the sick, then the nation

will need to plan for extra-hospital treatment centers or at-home care. But the first step must be to analyze the true usefulness of current plans in the context of modern medical care and its inherent realities.

3. Establish a substantial Research and Development Program for the Prevention and Treatment of Infectious Disease

At present, the great advantage in bioweaponry belongs to the aggressor. But by leveraging existing investments already being made by the private sector, the US government could spur the creation of new strategies for coping with bioweapons and infectious disease generally. Over the next few years, developments in the life sciences could create critically useful vaccines and medicines that could make bioweapons far less menacing and less likely to be used. Such advances might also provide tools that could prevent or cure some of the infectious diseases which account for half the deaths in developing countries and divert precious energy and resources away from their efforts to achieve self-sufficiency and prosperity.

Obviously, FEMA is not the proper agency to conduct a large scientific research program. But asking FEMA to coordinate bioterrorism response armed only with the vaccines and antimicrobial drugs currently available is tantamount to asking firefighters to battle a twelve-alarm blaze without water or foam. Little that FEMA does or can do will matter if we lack sufficient vaccines or adequate medicines to treat the sick and stop the spread of contagious disease. In some cases, effective treatments await new scientific breakthroughs that can only come from research. In other instances – the production of adequate supplies of smallpox vaccine, for example – what is needed is the will and organizational coherence to execute appropriate priorities.

4. Encourage, design and assess the use of training programs, exercises and drills for bioterrorism responders, including high-level decision makers.

Well-designed bioterrorism response exercises provide an opportunity to test preparedness plans and precepts. Tabletop scenarios and more elaborate drills provide opportunities for collaboration among the diverse array of communities and individuals who would be involved in managing actual epidemics. Exercises can also serve as powerful teaching tools, conveying the problems associated with bioterrorism response with a vividness that mere documents cannot provide.

Many of those who would be key participants in responding to a bioterrorism are unfamiliar with the nature of epidemics, public health and disease containment principles, or the functional capacities and limitations of the agencies and institutions which would be called upon to respond to a deliberate epidemic.

Should a bioterrorism attack occur, it would be, in the words of one former official, "a watershed event in American history", akin to Pearl Harbor. Such a moment is not the time for the country's leaders to first learn of the limits of their public health authorities or to realize that life-saving vaccines are in short supply. As was demonstrated in

TOPOFF, we have not yet created workable decision-making processes in the context of epidemics. It is important that key officials come to recognize the gravity and nature of the bioweapons threat and begin to marshal the institutional strength necessary to counter this unfamiliar challenge.

FEMA should continue to sponsor federal exercises such as TOPOFF and should encourage similar drills on the state and regional level. Attention should be paid to the technical accuracy and plausibility of exercise scenarios and to identifying what approaches are most useful in conveying key lessons or uncovering problems. One of the major failings of past exercises is the absence of publicly accessible assessments and feedback of the exercises.

Conclusion

The United States Commission on National Security in the 21st Century noted in its September 1999 report that "the most serious threat to our security may consist of unannounced attacks on American cities by sub-national groups using genetically engineered pathogens." Biological weapons, even in crude forms, have the potential to inflict horrible suffering and death. In this age of globalization, an attack on US citizens could quickly become a worldwide epidemic.

FEMA and HHS both have critical roles to play in preparing the country to respond to a bioweapons attack, but creating an adequate response to the threat of biological weapons will require the attention and power of the Administration and the Congress as well as the active engagement of biological scientists, and medical and public health professionals. Controlling the growing power of the life sciences will be one of the main tasks of this generation. Ensuring that the knowledge and ability to manipulate the secrets of living organisms is not bent to deliberately destructive purposes will be among our most pressing obligations.

STATEMENT BEFORE THE SENATE GOVERNMENTAL AFFAIRS SUBCOMMITTEE ON INTERNATIONAL SECURITY, PROLIFERATION, AND FEDERAL SERVICES

"FEMA'S ROLE IN MANAGING A BIOTERRORIST ATTACK AND THE IMPACT OF PUBLIC HEALTH CONCERNS ON BIOTERRORISM PREPAREDNESS."

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DIRKSEN SENATE OFFICE BUILDING
JULY 23, 2001

Dan Hanfling, M.D., FACEP
Senate Testimony
July 23, 2001

Mr. Chairman, Members of the Committee, and distinguished colleagues, I would like to thank you for giving me the opportunity to come before you today to testify on this matter of great importance to the well being of our nation. I am Dr. Dan Hanfling, a board certified emergency physician with extensive experience in the delivery of out-of-hospital emergency care, and a special interest in disaster medicine.

As an 'ER doc' working in the trenches of a teeming, bustling emergency department and trauma center, as medical director of one of the best respected Fire and Rescue services in the country, and as a veteran of the Urban Search and Rescue disaster environment, I can tell you that I have seen pain, suffering, and devastation that is at times unimaginable. But the consequences of a surreptitious release of a biological agent in our midst, or the effects of an as yet unconsidered newly emerging infectious pathogen could be even worse. The challenges that would result are almost too large, and too complex, to comprehend. It is imperative to recognize that facing the horror of a biological terrorist attack will require a multifaceted and complicated response. However, this will be an act perpetrated on a local community, and this is where the response must begin. Therefore, the creation of strategic partnerships, especially those at the local level and including the emergency medical and nursing communities, will be of tremendous benefit in attempting to address this very serious issue.

I would like to begin my remarks by commenting on the ability of hospitals, and especially emergency departments, to handle the conditions that would likely exist in the aftermath of an act of bioterrorism. Let's put things in perspective. Washington Post, Metro section headline, March 10,1999: "Condition White: Forget Nuclear War. Snow shuts down city." Now, that ought to put a little chill into the air. Conventional disaster planning in the pre-hospital and hospital communities is largely focused on transportation related events, with some communities at higher risk of natural disasters also focused on those issues. Planes, trains, automobiles... and earthquakes, hurricanes... possibly a school shooting. Such events may result in the transport of tens, or hundreds of patients to local emergency departments and trauma centers. Although commonly referred to as a 'multiple casualty incident', planning for such circumstances would in no way prepare a hospital to cope with the eventuality of a mass casualty event that would result as a consequence of a deliberate biological attack. Furthermore, the current model of hazardous materials [HAZMAT] disaster mitigation for which most hospitals are somewhat prepared has absolutely no relevance to the management of a biological event.

Given the current state of affairs in emergency departments and hospitals across the land, one might be given to the notion that many are operating in a 'disaster mode' from day to day. Emergency department overcrowding is again a serious public health issue that requires urgent consideration. This is in turn due to a coalescence of factors currently affecting many of our nation's hospitals. These issues can be summarized as follows. Firstly, there are fewer hospitals and thus fewer inpatient beds than there were

ten years ago. The same is true of emergency departments. Hundreds of emergency departments have closed in the past decade. Meanwhile, the number of emergency department visits has increased dramatically. As a result, fewer hospitals are caring for more patients. Secondly, many hospitals and their emergency departments are finding registered nurses, other health professionals, and support staff hard to come by. This is a national shortage of significant consequence in that the quality of patient care is at issue. Third, Federal funding to hospitals has decreased, as have reimbursement rates. In the meanwhile, regulatory requirements have increased, forcing an already taxed staff to spend more time on documentation, and less time devoted to patient care. These issues reflect a current crisis in healthcare, resulting in serious overcrowding and frequent periods during which patients being attended to by paramedics and emergency medical technicians are 're-routed' from one hospital to the next. In northern Virginia, this is what we refer to as 'circling the Beltway.'

Local preparedness must begin with the hospitals. Hospitals, and in turn, their emergency departments, hold an esteemed place in the community by virtue of their responsibility to the health and well-being of the communities in which they are situated. In an event such as a bioterrorism attack, the public would expect that the hospitals be capable of handling such responsibilities.

However, there are numerous impediments to successful disaster planning and preparedness at the local level. There are significant constraints present in the existing system. As mentioned previously, bed availability and the acceptance of patients into already crowded hospitals is a big issue. So are the vagaries of pharmaceutical and equipment supply. Did you know, for example, that we are currently experiencing a nationwide shortage of tetanus (Td) vaccine for immunization? And that here in the metropolitan DC area, most area hospitals draw additional personnel and medical equipment, such as respirators, from the same few vendors. Likewise, effective communication links are crucial, yet only a handful of communities have invested money into creating a system that will work in a crisis.

Some of the problems in promoting local disaster preparedness have to do with difficulties in getting the process started. Often absent is a champion for this cause. It is frequently difficult to get "buy-in" to developing a plan and committing resources for an event that might never occur. "Oh, that could never happen here." As a result, there is often no funding source. The time, staffing and resources required to plan, train and re-train cost money. The absence of a devoted, steady stream of funding may be the single biggest issue related to lackadaisical or incomplete local planning efforts.

There is another issue that bears mentioning. Local planning was set back by the early response and training efforts that lumped nuclear, biological and chemical (NBC) terrorist threats together under the generic umbrella of weapons of mass destruction (WMD). In fact, this is still being done. Yet each type of potential exposure involves a unique and very different set of medical management issues, beginning with initial evaluation and treatment and extending to definitive diagnosis and disposition. While 120 cities around the nation received educational and training experience under the Nunn-Lugar-Domenici sponsored Domestic Preparedness Program, its focus was primarily from the military perspective, and the equipment grants were primarily geared toward chemical terrorism and the outfitting of fire department and HAZMAT teams. This confused the issue with respect to biological terrorism, which should not be mistaken for a "first responder"[police and fire service] event. And while the training did include a module for hospital providers, generally speaking it was not well attended, and covered too much information in too short a period of time.

So, what must we do? We need to enhance our nation's existing medical infrastructure. We should expand existing hospital bed capacity, what some have referred to as developing a 'surge' capacity, and what I call creating 'boomer beds'. Even if a mass casualty situation is not at hand, we must be prepared to provide for the acute medical conditions of an aging population. This can be accomplished by increasing federal and private payer payments to hospitals, earmarked specifically for bed expansion projects and commitment to developing specialized care services, such as intensive care units. Hospitals must also be given the capacity to improve laboratory capabilities for enhanced diagnosis, information systems for improved patient tracking, and specific disease management related strategies, such as increasing the number of negative pressure isolation beds available.

We must increase the staffing capabilities of our hospitals, by providing the necessary incentives to recruit and retain nurses and other health care workers. While there will naturally be an emphasis on providing more clinical staff, there must also be an attempt to augment the non-clinical support staff, without whom the hospitals simply cannot function. In a report prepared by the American Hospital Association with the support of the Office of Emergency Preparedness, U.S. Department of Health and Human Services [August 2000] entitled "Hospital Preparedness for Mass Casualties," the recommendation was made to develop a community-wide pool of "reserve staff." This back-up pool of health care providers would be primarily comprised of physicians, nurses and hospital workers who are not currently practicing in the clinical arena, but with proper training and protocols could be utilized in a mass casualty event. This would require proper credentials and licensure, efforts which are currently very regimented and time consuming. For this idea to work, regulations governing such processes must be re-examined.

While we are on the topic of paperwork, attention must be focused on the numerous Federal regulations that govern medical practice. Specifically, amendments to the Emergency Medical Treatment and Labor Act [EMTALA] will be required if hospitals are to effectively operate in a bioterrorism environment. Currently, hospitals are mandated to provide a medical screening exam for all patients. The intent of EMTALA is consistent with the important function that emergency departments have in providing America's health care safety net. However, such arrangements may be impractical in the setting of domestic terrorism. One strategy that might be employed would be to divert patients from one hospital to another, possibly without offering initial medical attention. Unless there is an amendment to these regulations, doing so would be against the law, subjecting hospitals to a hefty fine.

We must develop and keep available stocks of medical equipment, supplies and pharmaceuticals in the local communities. While a push-package from the National Pharmaceutical Stockpile will be necessary for any extended incident, available supplies must be accessible immediately. Given the current state of health care business practices, in which we are essentially using just what is needed and keeping a very thin inventory, a sudden demand on the system would be crippling, with supplies quickly exhausted.

Furthermore, we must develop enhanced communication capabilities that link hospitals into a community-wide health care network. This must include both external communication links, such as radio systems and internet linkages, as well as internal communication capabilities, in the event that telephones are overloaded, or simply not working.

Finally, financial support of our unsteady medical infrastructure must also be directed toward enhancing local public health capabilities. The tremendous efforts of Senators Frist and Kennedy in lobbying support for their Public Health Threats and Emergencies Act, which was passed by the 106th Congress as the Public Health Improvement Act of 2000 demonstrates just the sort of commitment needed. Without the disease detectives helping to make sense of the multiple elements of data that require scrutiny and proper medical context, early detection of a biological agent release into the community, or the discovery of an emerging infectious pathogen would be very hard indeed. Specific attention must be paid to creating a meaningful surveillance system that allows integration of multiple data points relevant to a possible biological event. Even without shooting for pie-in-the-sky information system capabilities, funding must be made available to pay for the man-hours required to conduct drop-in surveillance, such as was performed during the last Presidential Inauguration.

Relationships with Federal agencies such as FEMA, HHS and the CDC have been improving at the State level, but are somewhat limited at the local level. While it is well understood that the mechanisms and avenues for support are in existence, it is increasingly clear that the tasks that need to be accomplished in order to mitigate a major disaster must be done with local resources and by the local community. The Federal Response Plan [FRP] Terrorism Incident Annex clearly designates FEMA as the lead agency for consequence management within the United States. In turn, it is FEMA policy to use the FRP structures to coordinate all Federal assistance to State and local governments. This amounts to what is initially perceived to be a "trickle down" movement of manpower and materiel into the affected disaster zone. Successful local disaster planning efforts must be predicated on the fact that the cavalry is not coming, at least not right away. Furthermore, to complicate matters, members of the local emergency management community are often participants on Federal support teams that are designated to provide assistance. For example, the paramedics, firefighters, emergency physicians and nurses in a local community may also comprise the overwhelming majority of positions on the Disaster Medical Assistance Team [DMAT], or the Metropolitan Medical Response System [MMRS], or an Urban Search and Rescue Team [USAR]. It is often the best and brightest who are attracted to such positions, the same folks who hold key positions in their day jobs.

In addition, some of the difficulties experienced with certain of these Federal programs have left some local emergency planners skeptical of their true capabilities. For example, in development of the MMRS, there remain significant barriers between the pre-hospital and hospital communities. These are almost certainly the result of financial issues, logistic difficulties and political battles.

I believe that the interaction between these Federal agencies and the local communities could be better served by enhancing and promoting local capabilities through improved education, training and disaster planning. What is required is Federal funding specified for hospital bioterrorism preparedness. This process has already begun. The Department of Health and Human Services [HHS] and the American College of Emergency Physicians [ACEP] recently released a report, funded by the HHS Office of Emergency Preparedness, on the current state of training for civilian emergency medical responders [including paramedics, nurses and physicians] in preparation for nuclear, biological or chemical terrorism. The report evaluated current training programs, analyzed barriers to implementing training, and established objectives, content and competencies for the training of emergency health care workers. It is clear that we must begin by creating a cadre of knowledgeable, well-prepared health care professionals.

A second focus could be the development of a community disaster-planning template, building on the guidelines of the Joint Commission on Accreditation of Hospital Organizations [JCAHO]. Hospitals are required to follow JCAHO guidelines in order to maintain their accreditation. However, they receive no funding to implement such guidelines. Funding to create a community model for bioterrorism preparedness could be used to organize and coordinate existing local resources and provide direction for additional planning. This would allow urban, suburban and rural communities to have a framework upon which to build their bioterrorism preparedness plans.

A local planning template should include some of the following elements. It should outline the steps required to establish alternate basing of treatment facilities outside of hospital campuses. This might include the use of school buildings, houses of worship, sporting arenas and hotels. It must emphasize mutual aid plan development and should promote regional cooperation. The template should highlight the means of access to expert knowledge. Finally, any local planning framework must include partnership with the public safety agencies, police and fire, along with the postal service, and where available, reliable courier or delivery services. Such resources will be crucial to effecting the delivery of needed supplies, for example medications and medical equipment, to a widely dispersed population who may be told to remain at home, or to congregate at alternative treatment facilities.

In summary, there are three key areas where Federal funding should be directed now so as to improve local preparedness for the unthinkable release of a biological agent into our communities. Taking an all-hazards approach, support of such endeavors will be of significant value-added benefit to our communities on a day-to-day basis. First, invest in restoring our medical infrastructure to be the strongest possible. Second, support the development of a meaningful partnership between the medical and public health communities. This must include improving the capability for active surveillance, only possible with a robust public health infrastructure. Third, promote disaster preparedness at the local level specifically by funding educational, training and planning initiatives.

I must reiterate a point made before this Subcommittee previously regarding hospital preparedness for incidents involving biological weapons. Frankly, emergency departments, hospitals and the health care community are not organized to treat victims of a bioterrorist attack. Meaningful discussion on the issue of domestic preparedness must focus on the development of community-wide endeavors to meet this awesome challenge. In order to be truly effective, the planned federal efforts to improve domestic preparedness will require substantial additional resources and funding at the local level. With 20/20 hindsight, one can say that "duck and cover" represented a preposterous civil preparedness stance in the face of a nuclear attack. Please don't let the emergency planners of tomorrow look back at how we handled the threat of biological terrorism and chuckle, the way we do now.

Mr. Chairman and Members of the Subcommittee, I thank you for your interest in this extremely important matter, and would be happy to answer any questions that you may have.

Follow-up Questions from the GAC-ISPFS Hearing on July 23, 2001 FEMA's Role in Managing Bioterrorist Attack and the Impact of Public Health Concerns on Bioterrorism Preparedness

Questions for Mr. Baughman, Director, Planning and Readiness, FEMA:

1. A new executive order regarding federal domestic preparedness organization was announced to the press, but its release was postponed. A draft version has been in circulation for some time now. Could you comment on what issues have delayed the executive order's release? Do you anticipate its final release in the near future?

The only official announcement regarding domestic preparedness and specifically referencing FEMA was the Statement by the President of May 8, 2001, *Domestic Preparedness Against Weapons of Mass Destruction*. The President's statement charges the Vice President with overseeing the development of a coordinated national effort. In addition, Director Allbaugh was asked to create the Office of National Preparedness (ONP) in order to implement the results of those parts of the national effort overseen by the Vice President that deal with consequence management; coordinate all Federal programs dealing with WMD consequence management; and work closely with state and local governments to ensure their planning, training, and equipment needs are met.

Establishment of the FEMA Office of National Preparedness is going forward. Although the Administration may well issue an Executive Order or other guidance relating to the work of ONP and other related elements of the Government, establishment and operation of ONP does not depend on any additional guidance.

On September 21, 2001, in the wake of the horrific terrorist attacks of September 11, 2001, and reflecting the work the President asked the Vice President in May to do on the matter, the President announced that he will establish within the Executive Office of the President an Office of Homeland Security (OHS), headed by Governor Tom Ridge, as Director of the Office, with cabinet rank. The Administration has stated that the Director of OHS:

- will have a coordinating function and not so much an operating function
- will coordinate through the OHS staff the homeland security-related activities of the various responsible Federal departments and agencies, in much the same way as the Assistant to the President for National Security Affairs coordinates through the National Security Council staff structure on U.S. activities abroad;
- will have a major responsibility to work with State and local government; and
- will have a significant responsibility with regard to the Office of Management and Budget review of the budgets for the homeland security-related activities of the various responsible Federal departments and agencies.

Follow-up Questions from the GAC-ISPFS Hearing on July 23, 2001

2. Although FEMA does not have an equipment program to help states and communities acquire resources and tools to prepare and respond to terrorist events, it does coordinate with the NDPO, the leading interagency effort to develop a standardized equipment list (SEL) for the first responder community. The NDPO list conforms to existing laws and regulations, and is used by the Department of Justice in their training programs with local communities. Currently, what items on the standardized equipment list are useful for bioterrorism first responders?

The Interagency Board (IAB), co-chaired by the Departments of Defense and Justice, developed the SEL for Equipment Standardization and Interoperability in coordination with the NDPO to delineate the types of equipment necessary for terrorist incident response. This list is broken down into the following seven areas:

- Personal Protective Equipment,
- Operational Equipment,
- Explosive Device Mitigation and Remediation,
- InterOperable Communications and Information Systems,
- Detection,
- Decontamination, and
- Medical.

There are a number of items on this list that are useful for bioterrorism first responders, to include, point detection systems/kits, biological sampling evidence kits, as well as medical supplies and equipment. The complete 2001 SEL is available on the Internet at www.iab.gov/SEL/sel2001.htm. However, we note that, in addition to standards, vigorous research and development programs are needed to improve the range of capabilities and effectiveness of equipment in the areas cited.

3. In FY 1999, FEMA provided $12.2 million in grants for terrorism-related preparedness activities. The FY 2000 and FY 2001 budgets increase this amount by $8 million. These funds went to State emergency management agencies to support terrorism consequence management planning, training, and exercise activities, as well as $4 million a year for State fire training systems. How much of these funds were dedicated to bioterrorism preparedness and consequence management? Could these funds be applied to public health infrastructure improvements with dual uses in bioterrorism response, such as diagnostic laboratories or surveillance systems?

FEMA provides grant assistance to support state and local consequence management planning, training, and exercises for all types of terrorism. The spectrum of terrorist incidents includes bioterrorism, but the grants are focused generally on enhancing the framework of emergency management to deal with all types of terrorist incidents, rather than being incident-specific.

We do not have specific information that we can provide at this time regarding the amount of assistance that is directed solely towards bioterrorism.

FEMA's assistance does not apply to public health initiatives; however, the Center for Disease Control has grants being awarded to enhance the public health infrastructure. The Assistant to the Secretary of Health and Human Services for Bioterrorism would be best able to answer this question.

Follow-up Questions from the GAC-ISPFS Hearing on July 23, 2001

4. FEMA works with communities in developing area disaster mitigation plans. Typically, local officials will perform a risk assessment of different events, the losses associated with a type of event, and the likelihood of that event occurring. Should these communities include terrorism in such mitigation plans? Should they be separate from other disaster preparedness, or part of an integrated plan to deal with both natural and manmade disasters? Do community planners receive any training from FEMA?

FEMA supports an all-hazards approach to emergency management, covering natural as well as man-made hazards. Assessments specific to terrorism at the state level are conducted through a number of different programs, most notably FEMA and Department of Justice.

FEMA and the National Emergency Management Association (NEMA) have developed the Capability Assessment for Readiness (CAR), a readiness and capability self-assessment for use by State emergency management agencies. The CAR process is designed to assess the operational readiness and capabilities of State emergency management to respond to major disasters and emergencies. The assessment focuses on thirteen emergency management functions and offers hazard-specific analysis that includes natural and man-made hazards. A National Summary Report that assesses CAR data from all 56 states, territories, and insular areas will be submitted to Congress later this year. A CAR self-assessment instrument for use by local jurisdictions is being prepared for distribution towards the end of this year.

The Office for State and Local Domestic Preparedness Support within the Department of Justice has an assessment program in place (State Domestic Preparedness Equipment Program) that requires states and territories to conduct individual needs and risk assessments. The states then use that information to develop individual statewide strategies to address needs in the area of equipment, training, exercises, and technical assistance.

FEMA offers a number of courses for first responders, incident commanders, emergency management personnel, specialists, and civilians. One example is the independent study program *Emergency Preparedness, USA*. This course contains information about natural and technological hazards, and leads participants through the development of emergency preparedness plans.

5. Without some control over budget decisions, it has proven very difficult to coordinate federal programs across different agencies. What authority will be given FEMA regarding the program budget allocations within other government agencies, and the annual budget submissions to the OMB? What line authority will FEMA have over other agencies' programs management to ensure compliance with coordination guidelines? Within FEMA's own budget, are there adequate resources to undertake this mission? Is a revised FY 2002 budget request to be expected? Will a FY 2001 supplemental request be necessary?

With regard to budget matters, the ONP will work with the new Director of the Office of Homeland Security, as appropriate. It is too early at this point to speculate on specific resource requirements for carrying out this function.

Follow-up Questions from the GAC-ISPFS Hearing on July 23, 2001

6. In your written testimony, you state that FEMA's National Fire Academy courses in Emergency Response to Terrorism, which included bioterrorism, have been sent to fire and rescue departments, law enforcement agencies, and local and State emergency managers. Many believe that an underlying problem to effective bioterrorism response is that the medical community is not involved. Do you think these materials would be useful for medical schools, associations, or hospitals?

The *Emergency Response to Terrorism* courses offer practical training for first responders to prepare them to deal to incidents of terrorism. Many of the lessons learned from these courses can be applied to a wide range of response areas. Two courses in particular, as listed in the January 2000 Compendium of WMD Courses, might be useful to the medical community.

> *Emergency Response to Terrorism: Basic Concepts.* This course is to "prepare first responder for terrorist incidents dealing primarily with life safety and self preservation within the areas of biological, nuclear, incendiary, chemical, and explosive attacks. This focus includes information on detection and monitoring for the above mentioned topics."
>
> *Emergency Response to Terrorism: Tactical Considerations – Emergency Medical Services.* "This course is designed for the first-on-the-scene responding EMS personnel who have the responsibility to render patient care to victims of terrorist incidents. The students will be trained in security considerations, identifying signs of terrorism, anticipating unusual response circumstances, assessing information, and initiating self-protection actions. They will also apply their knowledge about responding to a terrorism event, provide patient care, identify and preserve evidence, manage site safety, document the event, and debrief personnel."

Also, as Mr.Baughman testified, the National Fire Academy is developing a new course for FY 2002 in the *Emergency Response to Terrorism* series that is specifically geared toward bioterrorism response in the pre-hospital recognition and response phase.

Senator Daniel K. Akaka
Follow-up Questions for
GAC-ISPFS Hearing on July 23, 2001
FEMA's Role in Managing Bioterrorist Atatck and the
Impact of Public Health Concerns on Bioterrorism Preparedness

Questions for Dr. Lillibridge, Special Assistant to the Secretary, Department of Health and Human Services for National Security and Emergency Management:

1. In your written testimony, you discuss how the expansion of the Laboratory Response Network will augment our effectiveness in dealing with bioterrorism. I agree that this will help many communities that do not have medical laboratory facilities get timely and accurate diagnoses. Have you considered adding state animal diagnostic laboratories to the Network to augment the existing Public Health laboratories, CDC, FBI, DOD and clinical laboratories?

Answer: Yes, that option has been under strong consideration since late 1999. On September 7, 1999 the CDC hosted a meeting with the United States Department of Agriculture (USDA) (Animal and Plant Health Inspection Service (APHIS), Food Safety Inspection Service (FSIS) and Agriculture Research Service (ARS)) to discuss combined needs and concerns associated with preparedness and response to bioterrorism. As part of that agenda, Dr. Bruce Akey (President Elect of the American Association of Veterinary Laboratory Diagnosticians) was brought into the overall discussion. Subsequently, and based on an Office of Justice Programs award to the School of Veterinary Medicine at Louisiana State University, we explored the possibility of leveraging a network of approximately twenty veterinary medical diagnostic laboratories at State universities and colleges which was conceptualized by Dr. David Huxsoll (who is now at Plum Island with APHIS/USDA). This meeting of federal agencies and professional societies (such as the American Association of Veterinary Laboratory Diagnosticians (AAVLD)) took place on June 29-30, 2000 to consider how a network of veterinary medical diagnostic laboratories could potentially be mobilized for supporting identification of samples from suspected or declared incidents of bioterrorism directed against humans, domestic livestock and companion animals. Discussions are ongoing around several issues.

For example, the State of Georgia recently requested analysis of a suspected anthrax item from the state animal diagnostic laboratory. The results were provided within an hour and at considerable saving. Have State and local public health officials been made aware of such options?

Answer: Yes, the Laboratory Response Network Working Group (CDC, Association of Public Health Laboratories (APHL), FBI, DOD, American Society of Microbiology (ASM)) has met with state public health laboratory officials to discuss these options.

2. In response to my question regarding HHS's engagement with the animal health community, you recognized the importance of this type of interaction and discussed the animal health experts that work within CDC surveillance. You also stated that you were exploring several options for active engagement with the veterinarian community. What are these options?

Answer: The options for engaging the veterinarian community include working with national professional societies, such as the American Veterinarian Medical Association (AVMA) and the Veterinary Medical Assistance Teams (VMAT's) organized by the DHHS Office of Emergency Preparedness (OEP). CDC has worked with veterinarians through agencies such as the US Department of Agriculture in assisting in the Foot and Mouth Disease (FMD) outbreak overseas. CDC veterinarians engaged in assisting in the FMD response plan put forth by the OEP.

It is my understanding that there currently does not exist a single senior level official with CDC or HHS who has the formal responsibility for regular contact with the animal health community. Is this one of options you alluded to during the hearing?

Answer: Since this deals with Dr. Lillibridge's role as the Special Assistant to the Secretary, he should provide the answer for this question. There is a Chief Veterinary Officer of the US Public Health Service who has the access to the animal health community. OEP also provides oversight to the VMAT's which also provides a conduit to the animal health community with regards to disasters.

3. You said that your bioterrorism response plans are in accordance with the Emergency Medical Treatment and Active Labor Act (EMTALA) of 1986. I asked Dr. Hanfling, an emergency room physician, about the impact of EMTALA on bioterrorism response. He stated that the Act seriously limits what a hospital may legally do during a crisis and suggested that it may need to be amended to fully compensate for crisis situations. Are there provisions with EMTALA that you believe restrict your ability to plan and carry out bioterrorism response activities?

Answer: (Still under development. This is the question that was holding up the responses. We're still working on it and will have to provide it later)

4. During her testimony, Dr. O'Toole discussed the resources and capabilities that the FBI has, as compared to the CDC or public health departments, that they could use in response to a bioterrorism event. One example she cited was that the FBI can mobilize hundreds of agents on a scene in hours to investigate an event. These agents would then be sent out to question victims to get similar information to what the medical and public health community will need, such as, "where have you been, when did you start feeling sick, what contact have you had, etc." If the two organizations could work

together, such as developing the same set of questions, then considerable time could be saved. Could HHS and CDC work with the FBI on a set of questions that would be useful for both law enforcement and the medical community?

Answer: HHS works very closely with the FBI in responding to bioterrorism. In fact, we collectively investigate all reports involving threats to the health of the population from bioterrorism. But we would not recommend that the FBI investigate infectious disease health risks in the population unilaterally any more than would we recommend that health providers conduct unilateral criminal investigations. HHS has a long track record of timely collaborative investigations with Federal law enforcement authorities and participation on special response teams of the FBI. HHS also works with the FBI WMD field agent to conduct familiarization training with the key element of bioterrorism response. Recently, for example, during an investigation in California, HHS and the FBI worked together with local health and law enforcement authorities to interview people who might have been exposed to health hazards. Each time we have a threat related to bioterrorism, HHS and the FBI participate in a coordinated, joint threat assessment process. We approach this process together and are already operationally linked.

Responses to Follow-up Questions from GAC-ISPFS Hearing on July 23, 2001 FEMA's Role in Managing a Bioterrorist Attack and the Impact of Public Health Concerns on Bioterrorism Preparedness

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QUESTION:
In response to my question on the utility of the crisis/consequence management model for bioterrorism, you described several shortcomings of this system. Do you know of an alternative to this system from a government organizational point of view?

RESPONSE:
The idea that one can distinguish between the crisis and the consequence does not take into account the nature of biological weapons. The "crisis/consequence" management model may be workable in situations which present as a sudden or distinct event when it is possible to distinguish between the initial moments or hours immediately after a terrorist attack – i.e. the "crisis" – and the aftermath, when managing the results of the attack is the dominant activity. In a bioterrorist attack there will be no "crisis", no obvious event, no explosion. Because infections with biological organisms involve an incubation period, the "attack" will likely not be noticed until people begin to become ill – which could be days or weeks after the perpetrator releases the bioweapons.

There has been confusion about what is meant by "crisis" and "consequence" since the PDD was first issued. Another peculiarity of "crisis/consequence" approach to managing bioterrorist attacks is that the FBI is placed in charge of managing an epidemic. This is not a responsibility that one normally associates with law enforcement organizations.

FBI has repeatedly stated that they will defer to health officials in matters of public health. It is unlikely, however, that decisions and operations will fit neatly into categories that are strictly within the purview of "public health". Decisions about what to tell the public, whether to use law enforcement officials to impose disease containment measures, etc., are sure to be controversial and to cut across jurisdictional lines.

The problem of who is – or should be – in charge of response to bioterrorism has preoccupied numerous government agencies and Congressional hearings and commissions. The reality is that if the US is attacked with a biological weapon, the President will be in charge and governors will be in the thick of local operational decisions.

It might be more fruitful to consider *what* would have to be accomplished in the wake of a bioterrorist attack and who or what agency is best suited to deliver needed services and decisions. Much of the confusion about who *should* be in charge on the federal level and what priorities should be addressed and how resources should be spent stems, I believe, from continuing confusion about how a bioweapons attack would differ from an explosion, or chemical attack, or other forms of terrorism. Most people have not experienced an epidemic and have no reference points for what this would be like. Hence, well-intentioned members of Congress fund National Guard teams with supposedly specialized expertise, which are unlikely to serve any useful purpose in an epidemic, while hospitals and public health systems are neglected – even though the main weight of the response will fall on such institutions.

Policy debates about how to formulate bioterrorism preparedness and response policies continue to be largely dominated by military experts and traditional emergency response personnel who know very little about epidemics.

There is a remarkable lack of information and an excess of optimism regarding the ability of US medical and public health systems to deal with a large epidemic. Similarly, very few biological scientists have been asked to publicly testify on the ease or likelihood of creating mass-casualty bioweapons. A large part of the confusion about how to organize the government to respond to bioterrorism is a result of a failure to actually investigate the facts about what the institutions that are key to response could actually do in the midst of an epidemic.

The initial and most important response will take place at the local and state level. Ensuring that states have adequate response plans, and understanding how federal assets might best be "plugged into" state needs is a neglected and vital set of issues.

QUESTION:
The Gilmore Commission and the General Accounting Office have both questioned the wisdom of focusing on catastrophic "doomsday" scenarios with regard to terrorism, viewing smaller scale incidents as more likely. Do you believe that if the United States prepares for catastrophic terrorism, it will necessarily be prepared for lesser events? If so, why?

RESPONSE:
My colleagues and I at the Johns Hopkins Center respectfully disagree with the Gilmore Commission and GAO findings that too much emphasis has been placed on overly pessimistic, "doomsday" scenarios. Indeed, we would make the case that NO ONE has seriously considered the possibilities or consequences of a determined terrorist *campaign* against the US – i.e., a series of bioweapons attacks deliberately designed to destabilize the country.

It is reasonable to argue that state governments and possibly FEMA should give a high priority to preparedness for the more likely and less cataclysmic scenarios, but I do not

think that this should be a major concern of the federal government. A terrorist attack using high explosives, or even a large chemical weapons attack, would not threaten the vital interests or continuity of the United States. On the other hand, a bioweapons attack – even one that initially exposed a relatively small number of people but employed a contagious disease – could destabilize the country and seriously compromise US strategic flexibility.

It is not the case that preparation for small or moderate sized biological events will provide adequate preparation for large-scale epidemics. Achieving "situational awareness" (how many people are affected, where are they, etc.) presents enormous difficulties if victims are spread out geographically or number more than a few dozen. The logistics of vaccinating millions of people are totally different from vaccinating hundreds. This is not to say that exercises must always be on the grand scale – they should not. But the federal government has an obligation, for the sake of national security, to consider worst-case scenarios.

The Gilmore Commission also offered the opinion that it is very difficult to build a biological weapon and that the chances of terrorist groups succeeding in such a project are very slim. This view may have contributed to their recommendation that there be more emphasis on smaller, less catastrophic scenarios. My colleagues and I also respectfully disagree with this judgment. I have yet to meet a molecular biologist who, when asked, thinks he could NOT build such a weapon! Progress in biology is not only increasing the potential potency and diversity of possible bioweapons, it is also simplifying the techniques needed to accomplish this.

QUESTION:
There has been considerable criticism within Congress, and among the policy community, of federal coordination with state and local governments. Efforts over the last few years to address these shortfalls have apparently met with only limited success, as complaints are still heard from state and local officials. What would you recommend as a reasonable allocation of responsibilities among federal, state and local governments? What tasks are most properly assigned to each level? Along that same line, do you find it advisable to have widely distributed, robust response capabilities at the regional, state and local level, or is a more centralized approach more practical? Finally, do you feel that state and local governments should assume some of the financial responsibility, or should bioterrorism preparedness be a fully federally funded initiative?

RESPONSE:
This is an important and difficult question. I think it is essential that the federal government take the lead in assuming both policy and financial responsibility for preventing and preparing for *catastrophic* terrorism attacks. I would include almost all biological and nuclear weapons attacks in this category, and possibly a campaign of other forms of terrorism intended to actually destabilize the country. In some sense, any *attack* on the US, regardless of its impact, is a national security matter and within the purview of

the federal government. Hence the bombing of the Murrah building was clearly seen as a federal matter, even though almost all the response was carried out locally.

It is my belief, based on substantial familiarity with local preparedness efforts in the past three years, that much of the unsatisfactoriness with training and preparedness programs to date is a result of fuzzy thinking about what we were trying to do, and a knee-jerk reaction on the part of federal agencies to hire government contractors who were unqualified to prepare the curriculum, training and exercises they were paid to create. To be fair, establishing local preparedness capabilities is very difficult – it will probably take ten years or more to build programs to do the job.

Some aspects of bioterrorism response should be grounded in local capabilities and some must clearly be federal. As noted, the confusion and hand wringing about who should do what mostly flows from a failure to clearly think through what an epidemic is and what will be demanded in response. For example, it is clear that the care of the sick will have to be a local matter. For many reasons, it will not be feasible to transport desperately sick and possibly contagious patients out of the area. The question becomes how could federal or non-local assets be of assistance to local healthcare institutions. [The National Medical Disaster System (NMDS) cannot function in an epidemic – a situation for which it was never intended. The usefulness of NMDS should be independently assessed on an urgent basis.]

On the other hand, vaccination policies will clearly be decided on the national level. It would be intolerable for different localities to assign different life-and-death priorities in dispersing what is essentially a national asset. Communication support – ensuring that hospitals and state public health agencies can talk to each other and also to the federal government – should probably be a shared, federal/state responsibility. The states should be held accountable for ensuring that hospitals can connect to health departments – but the federal government will have to insist that this be done and probably will have to provide some or all of the funds to do it.

One of the most interesting observations from Dark Winter – the smallpox scenario exercise that my colleague Tom Inglesby and I wrote in collaboration with Randy Larsen at ANSER – was that there was really NO confusion about state and federal roles. The only discussion about this was whether the National Guard should be federalized – and this debate did not last long once the "President" understood what that meant. It was quite clear, in the thick of managing the epidemic, who would make what sort of decisions. The problem was that neither the states nor the federal government had the *capacity* to do what needed to get done.

The immediate job before us is to think through the different pieces of epidemic response – care of the sick; protection of the healthy; containing spread of disease; tracking the epidemic; finding the perpetrators; etc.; and then to construct efficient systems for accomplishing the most vital tasks.

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Reply to Follow-up Questions from Daniel K. Akaka for Government Affairs Subcommittee on International Security, Proliferation and Federal Services' Hearing on July 23, 2001

FEMA's Role in Managing a Bioterrorist Attack and the Impact of Public Health Concerns on Bioterrorism Preparedness

During your testimony, you mentioned a "drop-in surveillance" program that you did during the Presidential Inauguration. Could you please describe that program and what you learned from that exercise?

During the two weeks surrounding the 2001 Presidential Inauguration, from January 12 through February 4, the Virginia Department of Health Office of Epidemiology engaged in a passive surveillance project in the northern Virginia region. This type of medical surveillance is focused on certain pre-defined medical and public health criteria that must be evaluated in the absence of any evidence or suspicion of a bioterrorist event. The Inova Fairfax Hospital Department of Emergency Medicine, and other area emergency departments, focused on emergency department patients seeking treatment for one of a number of syndromes that might have heralded the release of a biological agent in the metropolitan DC region during this time period. This required the emergency department staff to differentiate all patients into one of the following categories:

- Upper/Lower Respiratory with Fever
- Diarrhea/Vomiting/Abdominal Pain, or other GI distress
- Rash with Fever
- Sepsis or Non-traumatic Shock
- Suspected Meningitis, Encephalitis or Encephalopathy
- Unexplained Bilateral Paralysis
- Unexplained Death with History of Fever
- None of the Above

In addition, basic demographic information was gathered, and patients were asked about whether they had any connection with Inaugural proceedings. This passive surveillance project was similar to a number of others conducted around the country in association with other high-profile events.

Our experience at Inova Fairfax Hospital was that compliance on the part of emergency department physicians and nursing staff in completing these records was less than anticipated. Filling out these forms was perceived to create additional work. We were fortunate to receive tremendous support from the Virginia Department of Health, which assigned two epidemiologists to our emergency department. They reviewed every emergency department patient chart during that two week period. The project was a success, but only with the commitment and dedication of the public health professionals. Emergency department staff simply did not "buy-in" to the concept of doing what they considered to be "busy work."

This lack of interest can be addressed by education and training of emergency department personnel with the express purpose of highlighting their vitally important role as bioterrorism "first responders". Especially assuming that a bioterrorism attack will not be an announced event, it will take an astute clinician to recognize that something unusual is happening. Such surveillance projects, if they are to be truly successful, must be funded not solely at the State level, but at the local level as well. If the local emergency department is expected to take the time to provide such information, the staff must be

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compensated for the time required to complete this work. Meanwhile, more attention and support must be given to creating active surveillance capabilities that utilize existing computer databases in order to provide a real-time description of medical syndromes and other potential markers that might signify the release of a biological agent in the community. However, continuous medical surveillance programs may encroach upon proprietary concerns, patient confidentiality, and other highly sensitive issues. This will require further evaluation as such programs are implemented.

Although FEMA does not have an equipment program to help states and communities acquire resources and tools to prepare and respond to terrorist events, it coordinates with the National Domestic Preparedness Office (NDPO), the leading interagency effort to develop a standardized equipment list (SEL) for the first responder community. The NDPO list conforms to existing laws and regulations, and is used by the Department of Justice in their training programs with local communities.
As an emergency physician and active participant in disaster planning, what items would you like to see on the SEL that would be useful to bioterrorism first responders?

If by 'bioterrorism first responders' you mean what is referred to as the traditional first responder community, namely the paramedics, firefighters and law enforcement personnel that comprise our public safety agencies, then I would remind you that such personnel will probably have little impact in the initial recognition and management of a bioterrorist event. The real first responders to the release of a biological agent in our midst will be the staff of local emergency departments, private doctors and public health clinics. Much of the current efforts of the NDPO have been geared toward providing a response capability for local Fire and Emergency Medical Services agencies to handle a chemical attack, and to a lesser extent, a radiological emergency. Unlike chemical or radiological exposures, biological events will seldom, if ever, require decontamination of patients, which is the major focus of the current training and outfitting of the pre-hospital providers.

By contrast, the supplies and equipment required by a community to respond to a biological incident will primarily be those resources needed by the hospitals to take care of a large influx of patients. These patients will range from the critically ill, to the mildly symptomatic, to the unexposed but psychologically traumatized.

In a report prepared by the Centers for Disease Control (CDC) and the Association for Professionals in Infection Control and Epidemiology (APIC) entitled "Bioterrorism Readiness Plan: A Template for Healthcare Facilities," a number of recommendations, including the following, were made. Efforts must be made to improve the diagnostic capacity of hospital laboratories to isolate and identify the most likely threat agents. Hospitals must also make available appropriate isolation rooms that would be used for the care of patients with potentially contagious infections. Such efforts require funding in order to be successful. The steps required to provide appropriate ventilation and airflow, what we commonly refer to as 'negative-pressure' capability, is a costly undertaking both from the engineering standpoint, as well as the fact that such rooms are usually reserved for single patients. In this day and age of hospital overcrowding, such decisions cost money.

As I have discussed previously in my testimony, hospitals must also be prepared to put into place a plan for resource acquisition in the setting of a disaster that involves more patients than the existing system can reasonably handle. This includes, but is not limited to, solving the problem of bed availability, staffing shortages, communications needs, procurement of necessary pharmaceutical supplies, especially antibiotics, and the need to make available additional critical care resources, including ventilator equipment and cardiovascular monitoring devices. Furthermore, I believe we must focus attention on developing 'alternate care facilities' that would allow for the healthcare community to address the medical needs of the exceedingly large number of patients that might seek attention if a bioterrorism attack were to occur.

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In my opinion, these are the efforts that we ought to be focusing on with respect to bioterrorism preparedness. I am afraid that it will not be as simple as adding a few more items to the standardized equipment list. Rather, we are talking about some major structural changes and shifts in order to prepare the medical community for the horror of having to face a biological terrorist attack.

During the 2nd National Symposium on the Medical and Public Health Response to Bioterrorism, held in November 2000, James Bentley, of the American Hospital Association discussed the challenges facing hospitals with respect to the bioterrorism threat. Dr. Bentley thought that part of the reason there has been so little "buy-in" by the medical profession into bioterrorism is that the term, "Weapons of Mass Destruction" is so negative, hopeless, and politicized that physicians avoid the issue. Do you agree? In your written testimony, you state that this term also lumps biological events with nuclear and chemical, which tend to dominate planning, funding and response. Would the term "unconventional terrorism" be any better? Is there a way to describe the threat without demoralizing the medical community?

An esteemed colleague recently quipped that hospital administrators consider 'Weapons of Mass Destruction' to be the current reimbursement strategies of the Medicare and Medicaid programs. There has been little "buy-in" on the part of physicians and hospital administrators precisely because our day-to-day energies are focused on crafting the strategies needed to provide more care for sicker patients, all for less reimbursement. I don't have to tell you the precarious position many teaching hospitals find themselves in at the current time.

While I am less concerned that the use of such terminology is demoralizing or depressing, I do believe that at some point, many in the health care community might be tempted to throw up their arms in frustration. The thought of having to provide care in a situation which might never materialize, and if it did, one that would so overwhelm the existing system is a bit daunting. This is why we must fund the training and education of the medical community on these issues. We must take the steps to engage the medical community in becoming committed to the concept of disaster preparedness as a part of their contribution to the health and well-being of the community at large. However, continuing to expect participation for preparation for such eventualities can not continue to be an unfunded mandate.

Because the term "Weapons of Mass Destruction" lumps together three distinctly different terrorist modalities, each with broadly divergent diagnostic, therapeutic and mitigation implications, I do believe we should better define what it is we are dealing with. Taking a long view at this issue, what we are potentially facing is the exposure of large segments of our population to nuclear, biological or chemical weapons. Perhaps the term "Weapons of Mass Exposure," or WME would be more appropriate. I have heard this used already, and much prefer it to WMD. In place of "unconventional terrorism," I would favor 'calling a spade a spade.' Because whether it is nuclear terrorism, biological terrorism or chemical terrorism, it won't really matter unless we have taken the steps necessary to be prepared for each and any disaster that might befall the local community, or the nation at large.

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